ACIDIC PRECIPITATION IN ONTARIO STUDY

CUMULATIVE AMBIENT AIR CONCENTRATION LISTINGS 1987

JULY 1990

Ontario
Environment
Environnement
Jim Bradley, Minister/ministre

ISSN 0824-880X (main series
0835-4529 (sub series)

ACIDIC PRECIPITATION IN ONTARIO STUDY

CUMULATIVE AMBIENT AIR CONCENTRATION LISTINGS

1987

Report Prepared by:
Atmospheric Research and Planning Unit
Air Resources Branch
Ontario Ministry of the Environment

ARB-007-89

JULY 1990

RECYCLABLE

Copyright: Queen's Printer for Ontario, 1990
This publication may be reproduced for non-commercial purposes
with appropriate attribution.

PIBS 1067
log 89-2207-007

ACKNOWLEDGEMENTS

This report was prepared by Diane Green of the APIOS Atmospheric Deposition and Chemistry Program. However, the data themselves are a product of the combined efforts of many individuals. Precipitation samples were collected by a large number of site operators, whose names cannot be individually mentioned here, under the coordination of the APIOS environmental technicians Scott Kennedy (in the Southwestern Region), Steve Elliott (in Southeastern Region), Wim Smits (in Northwestern Region), Bill Trayling (Northeastern Region), and J.P. Varto (in Central Region). Sample handling was carried out by Sue Lampinen and Gail Fielding. Chemical analyses were performed at the Laboratory Services Branch under the coordination of Frank Tomassini. Invaluable clerical and computer assistance were provided by Peter Maheras, Joseph Lamb and Roberto Banchon. All enquiries regarding the reported data should be directed to Neville Reid, Coordinator, Atmospheric Deposition and Chemistry Program, at (416) 326-1691.

TABLE OF CONTENTS

		Page
PART I	INTRODUCTION	III
PART II	STATION DESCRIPTION AND LOCATION MAP	VI
PART III	CENTRAL REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS	

Station Name	Map Ref. No.	Page
Campbellford	13	1
Dorset	20	3
Uxbridge	11	5

PART IV NORTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

Station Name	Map Ref. No.	Page
Gowganda	25	7
Killarney	23	9
Mattawa	22	13
McKellar	21	15
Moonbeam	27	17
Moosonee	35	19
Turkey Lake	37	21

PART V NORTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

Station Name	Map Ref. No.	Page
Dorion	31	23
Ear Falls	35	25
Geraldton	30	27
Otter Island	38	29
Pickle Lake	36	30
Quetico Centre	32	32

PART VI SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

Station Name	Map Ref. No.	Page
Cloyne	14	34
Dalhousie Mills	16	36
Golden Lake	17	38
Smith's Falls	15	40

PART VII SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

Station Name	Map Ref. No.	Page
Colchester	01	42
Palmerston	08	44
Port Stanley	03	46
Shallow Lake	09	48
Wilkesport	04	50

PART I

INTRODUCTION

INTRODUCTION

The data listed herein are a summary of the results acquired from the APIOS cumulative ambient air sampling network from January 1987 to December 1987. All data presented in this report have been screened for validity. Remarks and qualifications have been appended to records, and/or results where necessary. The screening procedure involves the application of a Dixon Ratio Test to concurrent data from all the sites in the same region over a given sampling period. Field comments are referred to in order to assist in the identification of problematic samples. Samples that were determined to be obvious outliers were flagged as unreliable ("U"). The sampler utilized for cumulative ambient air sampling is the Metrex AS-2 low volume air sampler. The sampler is loaded and the filter pack is exposed for 28 days beginning at 0700 h EST and terminating at 0700 h EST at the end of the sampling period. Sampling details are described in another document[1].

Station Identification

The station identification is defined by four descriptive fields (e.g. - Dorset/Cumulative/LoVol #20). The first field refers to the sampling location. The second and third fields describe the sampling interval and the instrumentation used respectively. The last numeric field refers to the index code utilized on the location map.

Cumulative Ambient Air Concentration Listings

Each filter pack is loaded with a Whatman 40 filter, a nylon filter and a pair of Whatman 41 filters with the first two filter types being upstream and the last filter type being downstream. The Whatman 40 filter is analysed for particulates including SO_4, NO_3 and some trace metals.

1. Chan, W.H., Orr, D.B. and Vet, R.J. (1984). Acidic Precipitation in Ontario Study - An Overview: The Cumulative Wet/Dry Deposition Network. Ontario Ministry of the Environment Report #ARB-164-84-ARSP.

The nylon filter is analysed for gaseous HNOz and the Whatman 41 filter (impregnated with OzK_2CO_3 - glycerol) is analysed for gaseous SO_2. Beginning in 1985, "Sulphur Dioxide" is corrected by the addition of nylon filter sulfate. In these reports, the sulphur loading on nylon filters is interpreted as sulphur dioxide. However, it is possible that organic sulphur compounds also contribute to this loading. Methods do not currently exist quantify this contribution in routine network operation. The reported parameter "TOTL NO_3" represents total nitrates and is calculated by the summation of $N\text{-}HNO_3$ and $N\text{-}NO_3$. No individual value of particulate nitrate and nitric acid are reported due to potential artifacts of the filter media used. Prior to 1986, if a detection limit was encountered in the calculation of "TOTL NO_3" then a value corresponding to one half the detection limit was utilized. These results are no longer halved. Remark codes (e.g. -U, A) appended to individual results are defined in a later section.

<u>Field Comment Code Index</u>

A - Sampler malfunction
B - Hydro failure (known/suspected)
C - Flow volume suspect
D - Contamination (known/suspected)
E - Filter placement incorrect
F - Sample not submitted
Q - Other

<u>Office Comment Code Index</u>

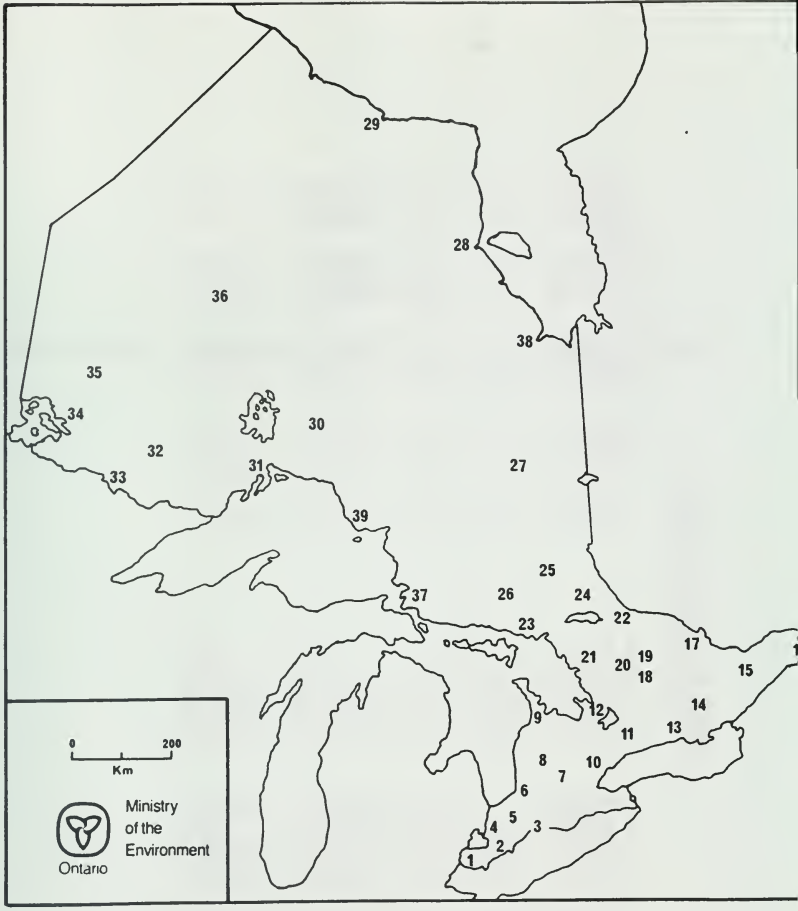
F - Data invalidated - if the daily average flow volume is outside the range of (2880 + 50%) litres per day.
Z - Abnormal sampling period.

Result Remark Code Index

< - actual result greater than value reported
> - actual result less than value reported
<T - actual result less than criterion of detection
<W - no response, minimum possible result reported
A - approximate value
U - unreliable result
D - outlier of Dixon Ratio Test

PART II

STATION DESCRIPTION AND LOCATION MAP



1. Colchester*
2. Merlin
3. Pt. Stanley*
4. Wilkesport*
5. Alvinston
6. Huron Park
7. Waterloo
8. Palmerston*
9. Shallow Lake*
10. Milton (removed March '84)
11. Uxbridge*
12. Coldwater
13. Campbellford*
14. Cloyne* (repl. Kalladar, June '83)
15. Smith's Falls*
16. Dalhousie Mills*
17. Golden Lake*
18. Wilberforce
19. Whitney
20. Dorset*
21. McKellar*
22. Mattawa*
23. Killarney*
24. Bear Island
25. Gowganda*
26. Azure Lake (repl. Ramsey, June '83)
27. Moonbeam*
28. Attawapiskat (rem. Feb '84)
29. Winisk (rem. Dec '86)
30. Geraldton (replaced Nakina, Aug '83)
31. Dorion*
32. Quetico Centre*
33. Lac la Croix
34. Experimental Lakes Area
35. Ear Falls*
36. Pickle Lake*
37. Turkey Lake*
38. Moosonee* (installed October '85)
39. Otter Island* (summer only)
40. Sutton, Quebec (Intercomparison Site)

* indicates both a wet and dry deposition network site

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS-ACIDIC PRECIPITATION IN ONTARIO STUDY
CUMULATIVE AMBIENT AIR SITES

STATION ID	MOE REGION	STATION NAME	ELEV (M)	LATITUDE (NORTH)	LONGITUDE (WEST)	UTM GRID CO-ORDINATES (NORTHING)	(EASTING)
000001-22-21-1041	SOUTHWESTERN	COLCHESTER	183	41°59'15"	82°55'41"	4649973	340284
000001-22-21-1061	SOUTHWESTERN	PORT STANLEY	213	42°40'22"	81°09'55"	4724277	486457
000001-22-21-1071	SOUTHWESTERN	WILKESPORT	183	42°42'11"	82°21'13"	4728515	389135
000001-22-21-1091	SOUTHWESTERN	SHALLOW LAKE	229	44°34'54"	81°06'58"	4936270	490782
000001-22-21-1101	SOUTHWESTERN	PALMERSTON	389	43°48'19"	80°54'12"	4850035	507776
000001-22-21-3011	CENTRAL	DORSET	320	45°13'26"	78°55'52"	5009656	662429
000001-22-21-3061	CENTRAL	UXBRIDGE	244	44°12'46"	79°12'38"	4896847	642958
000001-22-21-3081	CENTRAL	CAMPBELLFORD	175	44°17'28"	77°47'33"	4907783	277202
000001-22-21-4061	SOUTHEASTERN	SMITH'S FALLS	122	44°56'41"	75°57'48"	4977044	423999
000001-22-21-4071	SOUTHEASTERN	DALHOUSIE MILLS	69	45°19'00"	74°28'13"	5018048	541521
000001-22-21-4081	SOUTHEASTERN	GOLDEN LAKE	160	45°36'48"	77°12'03"	5053226	328397
000001-22-21-4091	SOUTHEASTERN	CLOYNE	259	44°49'10"	77°11'07"	4964999	327221
000001-22-21-5011	NORTHEASTERN	MCKELLAR	244	45°31'15"	79°55'19"	5041158	584196
000001-22-21-5021	NORTHEASTERN	KILLARNEY	183	45°58'20"	81°29'18"	5090859	462167
000001-22-21-5031	NORTHEASTERN	MATTAWA	198	46°16'39"	78°49'19"	5126968	667810
000001-22-21-5061	NORTHEASTERN	GOWGANDA	343	47°39'04"	80°46'32"	5277329	516647
000001-22-21-5071	NORTHEASTERN	MOONBEAM	244	49°19'40"	82°01'10"	5464175	425924
000001-22-21-5141	NORTHEASTERN	TURKEY LAKES	440	47°03'15"	84°24'20"	5214246	697468
000001-22-21-5161	NORTHEASTERN	MOOSONEE	8	51°12'35"	80°42'20"	5672970	520568
000001-22-21-5201	NORTHEASTERN	MCFARLANE LAKE	246	46°25'57"	81°57'03"	5142324	426948
000001-22-21-6011	NORTHWESTERN	DORION	244	48°50'33"	88°36'45"	5410982	381684
000001-22-21-6031	NORTHWESTERN	EAR FALLS	350	50°38'31"	93°13'13"	5609814	484424
000001-22-21-6041	NORTHWESTERN	PICKLE LAKE	360	51°02'41"	90°12'04"	5658308	696198
000001-22-21-6071	NORTHWESTERN	QUETICO CENTRE	420	48°24'44"	91°12'08"	5363461	633036
000001-22-21-6111	NORTHWESTERN	OTTER ISLAND	204	48°06'50"	86°04'25"	5329155	568954
000001-22-21-6121	NORTHWESTERN	GERALDTON	350	49°48'18"	86°45'52"	5516758	516950

PART III

CENTRAL REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=CAMPBELLFORD LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00094334	AP02131	AS	02	01	JAN 27, 1987	DEC 30, 1986	0930	1628	1	57146	
00094342	AP02175	AS	02	01	FEB 24, 1987	JAN 27, 1987	1715	0930	1	60000	
00094344	AP02210	AS	02	01	MAR 24, 1987	FEB 24, 1987	1445	1715	1	5097	
00094346	AP02210	AS	02	01	APR 21, 1987	MAR 26, 1987	1835	1830	1	25781	
00024618	AP02246	AS	02	01	MAY 19, 1987	APR 21, 1987	1800	1835	1	58002	
00024634	AP02284	AS	02	01	JUN 16, 1987	MAY 19, 1987	1706	1800	1	59387	
00024638	AP02307	AS	02	01	JUL 14, 1987	JUN 16, 1987	1620	1706	1	56344	
00024653	AP02377	AS	02	01	AUG 12, 1987	JUL 14, 1987	2030	1620	1	71066	
00106121	AP03182		02	01	OCT 6, 1987	AUG 12, 1987	1845	2030	1	.	
00024654	AP02420	AS	02	01	NOV 3, 1987	OCT 6, 1987	1700	1845	1	55792	
00024661	AP02443	AS	02	01	DEC 1, 1987	NOV 3, 1987	1825	1700	1	67089	
00024664	AP02467	AS	02	01	DEC 31, 1987	DEC 1, 1987	2050	1825	1	67058	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00094334				4.31	3.29	0.171	0.787	0.356
00094342				3.13	3.17	0.221	0.842	0.508
00094344		A	F	U 102.02	U 43.95	D 3.531	D 11.772	U 8.927
00094346			F2	U 4.66	U 9.85	U 0.359	U 1.668	U 3.530
00024618				2.43	2.66	0.065	0.457	2.155
00024634				2.74	6.28	0.156	0.589	0.901
00024638				2.72	6.73	0.129	0.435	D 2.360
00024653		A		LG 1.19	3.74	0.067	0.239	UG 3.462
00106121		AF	Z	****	****	****	****	****
00024654				4.72	3.32	0.148	0.583	0.242
00024661				4.61	2.52	0.116	0.514	0.365
00024664			Z	5.95	2.37	0.086	0.537	0.544

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=CAMPBELLFORD LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00094334	0.499	UG 0.527	0.360	0.067	0.064	0.036	0.023
00094342	0.558	0.092	0.375	0.086	0.060	0.046	0.021
00094344	U 6.867	U 0.981	U 3.963	U 0.957	U 0.106	U 0.408	U 0.373
00094346	U 0.795	U 1.738	U 0.394	U 0.353	U 0.072	U 0.161	U 0.043
00024618	0.310	0.105	0.133	0.280	0.386	0.177	0.025
00024634	0.387	0.117	0.189	0.136	0.148	0.066	0.011
00024638	0.399	0.213	0.188	0.212	0.295	< 0.004	0.014
00024653	0.260	0.053	0.093	0.139	0.124	0.104	0.020
00106121	****	****	****	****	****	****	****
00024654	0.296	0.075	0.073	0.124	0.191	0.043	0.003
00024661	0.313	0.064	0.158	0.035	0.034	0.030	0.015
00024664	0.380	0.040	0.194	0.047	0.041	0.046	0.007

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00094334	0.0052	0.004	0.00070	0.0012	0.0124	0.00072	1.6099
00094342	0.0078	0.003	0.00083	0.0012	0.0180	0.00065	1.6500
00094344	U 0.0922	U 0.031	U 0.02747	U 0.0157	U 0.3100	U 0.00647	U 27.6633
00094346	U 0.0198	U 0.004	U 0.00155	U 0.0035	U 0.0330	U 0.00120	U 3.7431
00024618	0.0162	LG 0.001	0.00362	< 0.0003	0.0224	0.00053	1.1982
00024634	0.0096	0.002	0.00168	0.0010	LG 0.0017	0.00039	2.0038
00024638	0.0128	0.003	0.00337	0.0007	0.0197	0.00082	1.7091
00024653	0.0063	0.002	0.00070	LG 0.0004	LG 0.0049	0.00324	0.9709
00106121	****	****	****	****	****	****	****
00024654	0.0045	0.004	0.00215	0.0013	0.0215	0.02330	0.8962
00024661	0.0060	0.002	0.00045	0.0007	0.0238	0.00224	0.6156
00024664	0.0037	LG 0.001	0.00075	0.0006	0.0149	0.00291	0.6860

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=DORSET LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00029632	AP02131	AS	02	01	JAN 27, 1987	DEC 30, 1986	0847	1401	1	33016	
00029648	AP02164	AS	02	01	FEB 24, 1987	JAN 27, 1987	1230	0915	1	38784	
00029655	AP02210	AS	02	01	MAR 24, 1987	FEB 24, 1987	0940	1230	1	81007	
00029661	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	1140	0941	1	78622	
00029669	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	1056	1142	1	80176	
00029673	AP02246	AS	02	01	JUN 16, 1987	MAY 19, 1987	1000	1100	1	75474	
00029687	AP02284	AS	02	01	JUL 14, 1987	JUN 16, 1987	1100	1015	1	75973	
00029694	AP02284	AS	02	01	AUG 11, 1987	JUL 14, 1987	0913	1100	1	78348	
00029698	AP02313	AS	02	01	SEP 8, 1987	AUG 11, 1987	1053	0913	1	77791	
00076012	AP02337	AS	02	01	OCT 6, 1987	SEP 8, 1987	1020	1055	1	80772	
00076028	AP02388	AS	02	01	NOV 3, 1987	OCT 6, 1987	1422	1022	1	84526	
00076032	AP02420	AS	02	01	DEC 1, 1987	NOV 3, 1987	0900	1422	1	81916	
00076038	AP02482	AS	02	01	DEC 29, 1987	DEC 1, 1987	1000	0900	1	82864	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00029632		A	F	7.05	3.39	UG 0.379	0.348	0.114
00029648		A	F	4.42	2.06	0.232	0.284	0.148
00029655				4.17	1.99	0.160	0.117	0.099
00029661				2.65	3.43	0.150	0.204	0.197
00029669				2.03	2.03	0.065	0.181	0.267
00029673		D		2.23	4.93	0.152	0.278	0.298
00029687				1.06	4.51	0.122	0.217	0.490
00029694				1.00	3.38	0.112	LG 0.083	0.258
00029698		B		3.48	5.21	0.145	0.219	0.215
00076012				2.94	3.80	0.115	0.161	0.211
00076028				3.60	2.83	0.134	0.278	0.219
00076032				3.84	1.75	0.110	0.226	0.562
00076038				3.74	LG 1.19	0.094	0.211	0.054

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=DORSET LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00029632	0.106	0.080	0.215	0.057	0.036	0.012	0.008
00029648	0.142	0.066	0.286	0.053	0.012	0.024	0.014
00029655	0.080	0.029	0.122	0.051	< 0.003	0.014	0.008
00029661	0.134	0.034	0.122	0.083	LG 0.009	0.026	0.007
00029669	0.137	0.032	0.090	0.155	0.173	0.072	LG 0.004
00029673	0.172	0.070	0.140	0.095	0.140	0.060	0.010
00029687	0.401	B 0.561	UG 0.259	0.269	0.277	0.151	LG 0.003
00029694	0.147	0.056	0.124	0.185	0.193	0.059	LG 0.002
00029698	0.193	0.053	0.121	0.197	0.228	0.076	0.009
00076012	0.186	0.044	0.084	LG 0.033	0.067	0.041	0.005
00076028	0.166	0.043	0.117	0.050	0.033	0.035	UG 0.037
00076032	0.244	0.040	0.108	0.050	0.123	0.040	0.010
00076038	0.145	0.014	0.086	0.025	0.012	0.006	LG 0.001

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00029632	0.0024	0.003	0.00030	0.0009	0.0036	0.00058	B 2.8471
00029648	0.0021	0.003	0.00284	0.0005	0.0119	0.00067	UG 1.9080
00029655	0.0022	0.005	LG 0.00025	< 0.0002	0.0094	0.00052	1.2159
00029661	0.0037	0.003	0.00102	0.0008	0.0100	0.00032	1.0938
00029669	0.0055	0.002	0.00225	0.0017	0.0051	0.00014	0.8394
00029673	0.0044	0.001	D 0.00411	0.0005	0.0119	0.00042	1.3780
00029687	0.0088	0.006	0.00276	0.0012	0.0250	0.00064	0.9056
00029694	0.0052	0.002	0.00306	0.0008	0.0073	0.00023	0.9764
00029698	0.0049	0.002	0.00167	0.0009	0.0094	0.00035	1.3112
00076012	0.0037	LG 0.001	UG 0.01028	0.0006	0.0149	0.01362	1.2133
00076028	0.0024	UG 0.006	LG 0.00024	0.0005	0.0101	0.00213	0.7903
00076032	0.0049	0.003	0.00244	0.0006	0.0232	0.01294	0.8643
00076038	0.0010	0.002	LG 0.00012	0.0004	0.0040	0.00216	0.7458

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=UXBRIDGE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00040586	AP02175	AS	02	01	FEB 23, 1987	DEC 30, 1986	1120	1045	1	63866	
00040589	AP02175	AS	02	01	MAR 24, 1987	FEB 23, 1987	0625	1120	1	89169	
00040623	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	0635	0625	1	83533	
00040634	AP02210	AS	02	01	MAY 19, 1987	APR 21, 1987	1005	0635	1	80350	
00040639	AP02246	AS	02	01	JUN 16, 1987	MAY 19, 1987	1020	1005	1	78770	
00040754	AP02284	AS	02	01	JUL 14, 1987	JUN 16, 1987	1000	1020	1	72866	
00040871	AP02300	AS	02	01	AUG 11, 1987	JUL 14, 1987	0640	1000	1	86876	
00080270			02	01	SEP 8, 1987	AUG 11, 1987	0715	0640	1	.	
00040958	AP02332	AS	02	01	OCT 6, 1987	SEP 8, 1987	0700	0715	1	89848	
00084002	AP02377	AS	02	01	NOV 3, 1987	OCT 6, 1987	0810	0700	1	79480	
00084015	AP02398	AS	02	01	DEC 1, 1987	NOV 3, 1987	0700	0810	1	82980	
00084027	AP02424	AS	02	01	DEC 30, 1987	DEC 1, 1987	1330	0700	1	84590	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00040586		AQ	FZ	5.67	LG 1.25	0.238	0.478	0.731
00040589				3.63	3.64	0.087	0.521	0.712
00040623				2.85	3.71	0.108	0.628	1.101
00040634		B		3.40	1.61	0.090	0.373	1.749
00040639				3.95	2.45	0.229	0.419	0.317
00040754		E		!NR ****	2.88	0.099	0.343	0.557
00040871				2.94	2.18	0.089	0.230	0.668
00080270		F		****	****	****	****	****
00040958				4.81	4.49	0.081	0.390	0.662
00084002				ARW 4.21	3.59	0.120	0.635	LG 0.050
00084015				5.20	2.33	0.160	0.494	0.265
00084027				6.52	2.38	0.062	0.556	0.408

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=UXBRIDGE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00040586	UG 0.986	0.040	0.407	0.077	0.108	0.049	0.008
00040589	RRV 0.477	0.064	U 2.378	0.081	0.074	0.043	0.006
00040623	0.287	0.039	0.150	0.085	LG 0.017	0.042	0.020
00040634	0.168	0.072	0.055	0.361	0.055	0.152	0.013
00040639	0.235	0.102	0.192	0.079	0.118	0.058	0.004
00040754	0.247	UG 0.342	0.073	0.155	0.186	0.065	0.001
00040871	0.155	0.066	0.062	0.105	0.094	0.074	0.010
00080270	****	****	****	****	****	****	****
00040958	0.256	0.068	0.096	0.097	0.048	0.089	0.032
00084002	0.327	!IL ****	!IL ****	LG 0.010	0.031	LG 0.006	0.013
00084015	0.325	0.061	0.146	0.074	0.034	0.038	0.007
00084027	0.337	0.029	0.142	0.063	0.022	0.053	0.014

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00040586	0.0049	0.002	0.00125	0.0008	0.0136	0.00034	1.3153
00040589	0.0067	0.004	0.00157	0.0006	0.0142	0.00044	1.0430
00040623	0.0063	0.002	0.00060	0.0008	0.0171	0.00024	0.6441
00040634	0.0199	< 0.000	< 0.00012	0.0009	0.0138	0.00027	1.0803
00040639	0.0060	0.002	0.00102	< 0.0003	0.0080	0.00036	2.7676
00040754	0.0092	0.003	0.00137	LG 0.0004	0.0152	0.00065	2.9918
00040871	0.0047	0.003	0.00115	0.0006	0.0077	0.00016	2.7971
00080270	****	****	****	****	****	****	****
00040958	0.0073	0.004	0.00078	LG 0.0004	0.0195	0.00073	0.6010
00084002	LG 0.0006	0.003	B 0.04454	B 0.0048	LG 0.0006	0.00063	0.6543
00084015	0.0036	0.003	LG 0.00012	B 0.0060	0.0211	0.00229	0.5640
00084027	0.0041	0.002	0.00059	LG 0.0002	0.0248	0.00166	0.5001

PART IV

NORTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=GOWGANDA LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00036552	AP02131	AS	02	01	JAN 27, 1987	DEC 30, 1986	1010	1100	1	81490	
00036638	AP02175	AS	02	01	FEB 24, 1987	JAN 27, 1987	1430	1010	1	82730	
00036715	AP02182	AS	02	01	MAR 24, 1987	FEB 24, 1987	1015	1430	1	59660	
00036795	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	0900	1015	1	78437	
00036859	AP02233	AS	02	01	MAY 12, 1987	APR 21, 1987	1645	0900	1	53646	
00036923	AP02246	AS	02	01	JUN 16, 1987	MAY 12, 1987	1120	1645	1	88283	
00036998	AP02284	AS	02	01	JUL 14, 1987	JUN 16, 1987	0910	1120	1	57060	
00037066	AP02300	AS	02	01	AUG 11, 1987	JUL 14, 1987	1130	0910	1	53485	
00037140	AP02320	AS	02	01	SEP 8, 1987	AUG 11, 1987	1217	1130	1	34626	
00081023	AP02352	AS	02	01	OCT 6, 1987	SEP 8, 1987	0950	1217	1	56990	
00081057	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	1030	0950	1	26925	
00081081	AP02414	AS	02	01	DEC 1, 1987	NOV 3, 1987	1000	1030	1	83717	
00081107	AP02432	AS	02	01	DEC 29, 1987	DEC 1, 1987	1010	1000	1	89000	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00036552				4.61		1.72		0.144		0.160		0.066	
00036638				2.91		2.12		0.112		0.145		0.071	
00036715		A		4.27		2.21		0.071		0.176		0.085	
00036795				4.77	LG	0.43		0.054		0.108		0.193	
00036859			Z	1.89		1.21	<T	0.023		0.084		0.214	
00036923			Z	4.24		3.40		0.102		0.113		0.249	
00036998				1.07		2.54		0.074		0.114		0.359	
00037066		A		1.95		1.80		0.070		0.056		0.112	
00037140		A	F	3.45		4.01		0.152		0.188		0.144	
00081023		A		3.46		1.74		0.044		0.123		0.154	
00081057		C	F	1.64	U	1.36	U	0.102	U	0.334	U	0.204	
00081081		D		6.37		1.67		0.087		0.113		0.084	
00081107				4.10		1.22		0.065		0.096		0.022	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=GOWGANDA LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00036552	0.123	0.031	0.295	0.044	0.036	0.034	0.006
00036638	0.109	0.050	0.138	0.041	0.022	0.019	0.007
00036715	0.268	0.040	0.233	0.175	0.173	0.078	0.007
00036795	0.115	0.031	0.067	0.017	< 0.003	< 0.003	0.015
00036859	0.186	0.028	0.108	0.101	0.105	0.055	0.009
00036923	0.125	0.047	0.113	0.128	0.177	0.074	0.011
00036998	0.228	0.083	0.145	0.171	0.254	0.079	0.005
00037066	0.187	0.107	0.122	0.141	0.143	0.061	0.010
00037140	UG 0.390	0.064	B 0.276	0.179	0.220	0.087	< 0.001
00081023	0.237	0.024	0.123	LG 0.009	0.037	0.035	0.003
00081057	U 0.464	U 0.015	U 0.214	U 0.132	U 0.261	U 0.078	U 0.002
00081081	0.245	0.046	0.153	0.041	0.049	0.022	0.002
00081107	0.129	LG 0.010	0.073	LG 0.005	0.013	0.022	0.003

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00036552	0.0021	0.005	0.00049	0.0002	0.0112	0.00049	0.2945
00036638	0.0039	0.007	0.00060	0.0002	0.0126	0.00040	0.9912
00036715	0.0062	0.006	0.00168	< 0.0003	0.0092	0.00042	0.8213
00036795	0.0014	LG 0.001	< 0.00013	< 0.0003	0.0041	0.00023	1.2430
00036859	0.0019	0.006	0.00186	0.0015	LG 0.0024	0.00021	0.6151
00036923	0.0043	0.007	0.00204	0.0003	0.0142	0.00084	1.1554
00036998	0.0065	0.005	0.00263	0.0005	0.0046	0.00032	0.9166
00037066	0.0037	0.004	0.00318	0.0013	0.0037	0.00021	1.2153
00037140	0.0032	0.008	0.00433	0.0017	0.0087	0.00006	UG 1.9927
00081023	LG 0.0018	0.002	UG 0.01351	0.0011	0.0140	0.01930	1.1897
00081057	U 0.0030	U 0.002	U 0.00446	U 0.0015	U 0.0019	U 0.02043	U 1.6267
00081081	0.0018	0.003	0.00131	0.0006	0.0185	0.00764	0.4420
00081107	0.0026	0.003	0.00045	0.0012	0.0043	0.00124	0.5337

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=KILLARNEY LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00036465	AP02115	AS	02	01	JAN 4, 1987	DEC 2, 1986	1044	1315	1	92490	
00036560	AP02131	AS	02	01	JAN 30, 1987	JAN 4, 1987	1320	1044	1	75570	
00036646	AP02175	AS	02	01	FEB 24, 1987	JAN 30, 1987	1445	1320	1	72530	
00036723	AP02182	AS	02	01	MAR 24, 1987	FEB 24, 1987	1126	1445	1	80680	
00036803	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	1320	1126	1	78370	
00036867	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	1425	1320	1	77920	
00036931	AP02246	AS	02	01	JUN 17, 1987	MAY 19, 1987	1310	1425	1	78070	
00037006	AP02284	AS	02	01	JUL 14, 1987	JUN 17, 1987	1035	1310	1	69050	
00037074	AP02300	AS	02	01	AUG 11, 1987	JUL 14, 1987	1850	1035	1	66150	
00037147	AP02320	AS	02	01	SEP 8, 1987	AUG 11, 1987	1020	1850	1	71360	
00081030	AP02352	AS	02	01	OCT 6, 1987	SEP 8, 1987	1130	1020	1	72380	
00081064	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	1710	1130	1	77470	
00081088	AP02414	AS	02	01	DEC 2, 1987	NOV 3, 1987	0945	1710	1	73420	
00081113	AP02432	AS	02	01	DEC 29, 1987	DEC 2, 1987	1107	0945	1	73460	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00036465			Z	4.78	2.81	0.249	0.335	0.078
00036560			Z	8.33	2.45	0.215	0.357	0.087
00036646			Z	10.39	2.55	0.145	0.303	0.099
00036723				11.54	2.01	0.118	0.149	0.063
00036803				D 12.10	UG 3.65	0.151	0.370	0.364
00036867				7.40	1.94	0.039	0.193	0.340
00036931				4.64	4.30	0.106	0.333	0.474
00037006		A		1.52	1.38	0.047	0.123	0.228
00037074		Q		2.24	2.71	0.076	0.128	0.212
00037147				1.82	4.12	0.119	0.196	0.161
00081030				1.95	3.52	0.128	0.207	0.188
00081064				3.43	2.07	0.133	0.271	0.181
00081088				4.74	1.76	0.082	0.266	0.184
00081113				4.46	1.65	0.092	0.225	0.027

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION-NE STATION-KILLARNEY LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00036465	0.146	0.052	0.101	0.036	0.033	0.022	0.009
00036560	0.238	0.057	0.237	0.050	0.034	0.028	0.008
00036646	0.276	0.063	0.151	0.054	0.105	0.030	0.011
00036723	LG 0.099	0.029	0.084	0.029	0.046	0.011	0.010
00036803	0.191	0.033	0.111	0.098	0.028	0.043	0.013
00036867	0.167	0.036	0.089	0.105	0.130	0.069	0.014
00036931	0.250	0.069	0.112	0.083	0.119	0.059	0.019
00037006	0.196	0.033	0.090	0.062	0.092	0.033	0.002
00037074	0.204	0.082	0.100	0.138	0.115	0.070	0.011
00037147	0.203	0.139	0.115	0.139	0.187	0.063	0.003
00081030	0.228	0.053	0.096	LG 0.025	0.128	0.044	0.007
00081064	0.323	0.051	0.123	0.096	0.126	0.052	0.004
00081088	0.334	0.057	0.161	0.155	0.105	0.070	0.006
00081113	0.218	0.021	0.085	0.050	0.039	0.061	0.004

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00036465	0.0023	0.003	0.00205	0.0003	0.0072	0.00058	0.2811
00036560	0.0030	0.006	0.00106	0.0007	0.0127	0.00056	0.2911
00036646	0.0037	0.007	D 0.00165	0.0006	0.0156	0.00080	0.3860
00036723	0.0022	0.008	0.00347	< 0.0002	0.0035	0.00063	1.3634
00036803	0.0061	0.007	D 0.00319	0.0010	0.0094	0.00069	1.0080
00036867	0.0044	D 0.005	0.00154	0.0009	0.0050	0.00045	0.8342
00036931	0.0044	0.002	0.00167	0.0004	0.0081	0.00055	1.3065
00037006	0.0033	0.004	0.00188	0.0006	LG 0.0023	0.00026	0.7936
00037074	0.0047	0.003	0.00348	0.0017	0.0039	0.00014	0.8360
00037147	0.0049	0.002	0.00196	0.0011	0.0097	0.00003	1.0650
00081030	0.0055	0.007	0.00953	0.0064	0.0228	0.01036	0.9713
00081064	0.0045	0.005	0.00052	0.0003	0.0239	0.00813	0.5977
00081088	0.0041	0.003	D 0.00449	0.0010	0.0136	0.01171	0.4876
00081113	0.0020	D 0.005	0.00136	0.0015	0.0106	0.00191	0.5622

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION-NE STATION-MATTAWA LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00036557	AP02131	AS	02	01	JAN 27, 1987	DEC 30, 1986	1415	1430	1	61540	
00036643	AP02175	AS	02	01	FEB 26, 1987	JAN 27, 1987	1350	1415	1	128731	
00036720	AP02182	AS	02	01	MAR 24, 1987	FEB 26, 1987	1315	1350	1	76500	
00036800	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	0945	1315	1	80260	
00036864	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	1100	0945	1	79130	
00036928	AP02246	AS	02	01	JUN 16, 1987	MAY 19, 1987	1030	1100	1	71610	
00037003	AP02284	AS	02	01	JUL 15, 1987	JUN 16, 1987	1230	1030	1	74910	
00037071	AP02300	AS	02	01	AUG 13, 1987	JUL 15, 1987	1450	1230	1	69940	
00037144	AP02320	AS	02	01	SEP 8, 1987	AUG 13, 1987	1850	1450	1	68970	
00081027	AP02352	AS	02	01	OCT 6, 1987	SEP 8, 1987	0910	1850	1	59880	
00081061	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	1005	0910	1	78920	
00081085	AP02414	AS	02	01	DEC 1, 1987	NOV 3, 1987	1020	1005	1	78960	
00081111	AP02432	AS	02	01	DEC 30, 1987	DEC 1, 1987	1530	1020	1	78100	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00036557		C		7.19	1.95	0.089	0.211	0.089
00036643			Z	10.91	2.63	0.153	0.186	0.120
00036720			Z	5.64	2.26	0.085	0.196	0.171
00036800				2.56	3.20	0.075	0.125	0.218
00036864				1.72	1.74	<T 0.028	0.133	0.613
00036928				2.19	4.18	0.087	0.105	0.384
00037003				1.07	3.16	0.057	0.100	0.531
00037071				0.76	2.14	0.054	0.050	0.422
00037144			Z	2.14	5.22	0.087	0.094 D	0.623
00081027				1.95	3.06	0.063	0.092 D	0.309
00081061				2.07	1.82	0.067	0.114	0.057
00081085				3.26	1.63	0.054	0.133	0.127
00081111				5.40	1.66	0.045	0.128 D	0.064

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=MATTAWA LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00036557	0.325	0.071	0.312	0.054	0.027	0.027	0.010
00036643	0.132	0.093	0.197	D 0.210	0.187	0.084	0.014
00036720	0.261	0.076	0.212	B 0.662	B 0.725	UG 0.259	0.014
00036800	0.231	0.070	0.146	B 0.523	D 0.081	D 0.201	0.009
00036864	D 0.278	D 0.069	B 0.179	B 1.485	B 1.403	D 0.625	0.008
00036928	0.307	B 0.191	0.138	D 0.305	D 0.345	0.128	0.013
00037003	B 0.501	0.131	0.150	B 0.581	B 0.707	0.230	0.005
00037071	B 0.465	0.092	0.146	B 1.135	B 1.435	D 0.490	0.008
00037144	0.326	0.127	UG 0.159	B 1.580	B 2.590	D 0.602	0.004
00081027	0.284	0.100	0.134	D 0.100	B 1.931	D 0.499	0.010
00081061	0.152	0.070	0.126	B 0.430	0.416	0.129	0.003
00081085	0.253	UG 0.132	0.161	0.201	0.033	0.076	0.006
00081111	0.198	D 0.044	0.140	B 0.256	B 0.222	D 0.134	0.008

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00036557	0.0036	0.004	0.00016	0.0005	B 0.1599	0.00049	0.4225
00036643	B 0.0105	0.005	0.00093	0.0009	D 0.0272	0.00061	0.8623
00036720	B 0.0209	0.007	0.00235	< 0.0003	0.0209	0.00076	0.8105
00036800	UG 0.0095	B 0.026	0.00150	0.0004	D 0.0305	0.00052	0.7015
00036864	B 0.0341	0.002	0.00265	D 0.0023	0.0100	0.00035	0.5560
00036928	D 0.0094	0.003	0.00265	0.0006	0.0119	0.00043	1.0236
00037003	B 0.0164	0.003	0.00187	0.0009	0.0131	0.00023	0.7315
00037071	B 0.0236	0.003	0.00372	0.0019	0.0087	0.00007	0.4575
00037144	B 0.0283	0.005	0.00783	D 0.0029	0.0148	0.00009	1.1208
00081027	B 0.0367	0.004	D 0.00384	0.0018	0.0225	0.01703	1.1356
00081061	B 0.0133	0.004	0.00190	0.0006	0.0152	0.01052	0.6209
00081085	0.0061	0.002	0.00152	0.0008	0.0058	0.00747	0.5193
00081111	D 0.0051	0.003	0.00090	0.0003	0.0205	0.00205	0.6248

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=MCKELLAR LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00036559	AP02131	AS	02	01	JAN 27, 1987	DEC 29, 1986	0815	0800	1	94560	
00036645	AP02175	AS	02	01	FEB 24, 1987	JAN 27, 1987	0820	0815	1	77430	
00036722	AP02182	AS	02	01	MAR 24, 1987	FEB 24, 1987	0830	0820	1	88550	
00036802	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	0820	0830	1	80903	
00036866	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	0815	0820	1	74541	
00036930	AP02246	AS	02	01	JUN 16, 1987	MAY 19, 1987	0830	0815	1	82969	
00037005	AP02284	AS	02	01	JUL 14, 1987	JUN 16, 1987	0830	0830	1	55581	
00037073	AP02300	AS	02	01	AUG 11, 1987	JUL 14, 1987	0820	0830	1	75837	
00037146	AP02320	AS	02	01	SEP 8, 1987	AUG 11, 1987	0830	0820	1	78469	
00081029	AP02352	AS	02	01	OCT 6, 1987	SEP 8, 1987	0830	0830	1	64939	
00081063	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	0835	0830	1	78796	
00081087	AP02432	AS	02	01	DEC 12, 1987	NOV 3, 1987	0830	0835	1	116898	
00081116	AP02432	AS	02	01	DEC 29, 1987	DEC 12, 1987	0845	0830	1	47102	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00036559				9.68	2.91	0.264	0.381	0.099
00036645		B		5.96	2.22	0.174	0.258	0.113
00036722				8.42	2.28	0.138	0.220	0.090
00036802				2.93	3.29	0.130	0.309	0.222
00036866				3.60	2.27	0.050	0.215	0.396
00036930				2.15	4.58	0.133	0.283	0.325
00037005		B		1.56	4.32	D 0.135	D 0.216	0.522
00037073				1.19	3.64	0.109	0.073	0.198
00037146				3.60	6.08	0.159	0.217	0.261
00081029		B		1.70	2.49	0.089	0.169	0.203
00081063				3.99	2.31	0.159	0.267	0.140
00081087			Z	5.08	1.80	0.124	0.214	0.090
00081116			Z	3.71	1.76	0.085	0.223	0.042

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=MCKELLAR LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00036559	0.486	0.057	B 0.534	0.043	0.033	0.026	0.013
00036645	D 0.510	0.057	B 0.499	0.057	0.043	0.033	0.012
00036722	0.265	0.051	0.156	0.047	0.060	0.019	0.014
00036802	0.266	UG 0.104	0.136	0.078	0.016	0.026	0.010
00036866	0.181	0.036	0.116	0.133	0.136	0.064	0.013
00036930	0.247	0.060	0.134	0.098	0.138	0.055	0.009
00037005	0.306	0.077	UG 0.165	0.175	0.228	0.067	0.004
00037073	0.185	0.065	0.110	0.104	0.074	0.047	0.009
00037146	0.268	0.120	UG 0.163	0.139	0.122	0.064	0.006
00081029	0.231	0.039	0.128	LG 0.008	0.044	0.046	0.003
00081063	0.228	0.049	0.095	0.077	0.073	0.034	0.004
00081087	0.231	0.034	0.126	0.045	0.020	0.043	0.008
00081116	D 0.456	LG 0.011	D 0.305	LG 0.006	0.020	0.037	0.005

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00036559	0.0034	0.005	0.00063	0.0007	0.0131	0.00054	0.3173
00036645	0.0034	0.003	0.00077	0.0008	0.0119	0.00053	1.1882
00036722	0.0032	0.004	0.00136	0.0005	0.0130	0.00070	0.9034
00036802	0.0052	0.001	0.00037	0.0007	0.0094	0.00042	1.0074
00036866	0.0031	0.001	0.00148	0.0008	0.0052	0.00031	0.8385
00036930	0.0046	LG 0.001	0.00121	0.0006	0.0096	0.00031	1.1245
00037005	0.0074	0.003	0.00252	0.0009	0.0077	0.00025	D 1.5167
00037073	0.0040	0.003	0.00316	0.0016	0.0054	0.00015	0.9929
00037146	0.0050	0.005	0.00191	0.0014	0.0108	0.00003	1.5038
00081029	0.0023	0.001	UG 0.01109	0.0009	0.0154	0.01494	0.9008
00081063	0.0038	0.003	D 0.00952	0.0010	0.0127	0.00901	0.6891
00081087	LG 0.0007	0.002	0.00077	0.0005	0.0133	0.00171	0.4431
00081116	0.0011	0.002	0.00042	0.0004	0.0059	0.00212	0.8450

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=MOONBEAM LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER 1
00036561	AP02131	AS	02	01	JAN 27, 1987	DEC 29, 1986	1338	1348	1	74680	
00036647	AP02175	AS	02	01	FEB 24, 1987	JAN 27, 1987	1327	1338	1	101060	
00036724	AP02182	AS	02	01	MAR 24, 1987	FEB 24, 1987	1350	1327	1	84250	
00036804	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	1250	1350	1	83120	
00036868	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	1415	1250	1	77950	
00036932	AP02246	AS	02	01	JUN 16, 1987	MAY 19, 1987	1330	1415	1	75770	
00037007	AP02284	AS	02	01	JUL 17, 1987	JUN 16, 1987	1345	1330	1	83280	
00037075	AP02300	AS	02	01	AUG 12, 1987	JUL 17, 1987	1353	1345	1	69550	
00037148	AP02320	AS	02	01	SEP 9, 1987	AUG 12, 1987	1428	1353	1	75850	
00081031	AP02352	AS	02	01	OCT 7, 1987	SEP 9, 1987	1441	1428	1	75910	
00081065	AP02390	AS	02	01	NOV 3, 1987	OCT 7, 1987	1435	1441	1	75550	
00081089	AP02414	AS	02	01	DEC 8, 1987	NOV 3, 1987	1335	1435	1	103040	
00081114	AP02432	AS	02	01	DEC 30, 1987	DEC 8, 1987	1430	1335	1	64640	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00036561				1.57	1.34	0.047	0.100	0.101
00036647				1.90	1.43	0.054	0.064 D	0.203
00036724				1.50	1.69	0.027	0.131 B	0.754
00036804				1.71	2.01	<T 0.018	0.102 B	0.710
00036868				1.15	1.23	<T 0.016	0.077	0.988
00036932				1.12	1.77	<T 0.026	0.073	0.535
00037007		QA	Z D	0.54	1.51	<T 0.021	0.060 D	0.910
00037075			Z	0.55	1.10	LG 0.018	<T 0.043	0.410
00037148				0.79	2.16	0.023	0.066	0.343
00081031				0.81	1.03	0.020	0.046	0.209
00081065				0.54	0.97	0.036	0.046	0.060
00081089			Z	1.66	1.24	LG 0.019	0.073	0.223
00081114			Z	1.35	1.39	0.037	0.093	0.031

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION-NE STATION-MOONBEAM LOVOL SITE NO.1

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00036561	0.388	0.037	0.356	D 0.022	0.027	D 0.047	0.003
00036647	0.134	0.052	0.160	0.046	0.066	0.057	0.005
00036724	0.184	0.036	0.116	0.186	UG 0.280	0.181	0.003
00036804	0.102	0.023	0.110	0.121	0.040	0.090	0.012
00036868	0.154	0.024	0.105	0.163	0.207	0.154	0.023
00036932	0.132	0.040	0.094	0.096	0.174	0.102	0.007
00037007	0.186	0.079	0.114	0.184	0.294	0.195	0.001
00037075	0.144	0.062	0.088	0.112	0.110	0.113	0.004
00037148	0.171	0.084	0.108	0.098	0.127	0.086	D 0.013
00081031	0.198	0.035	0.094	LG 0.005	0.063	0.063	0.003
00081065	0.179	<T 0.013	0.096	LG 0.038	0.040	0.023	0.004
00081089	0.233	0.035	0.131	0.052	0.081	0.051	0.002
00081114	0.131	LG 0.011	0.103	0.021	0.013	0.043	0.004

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00036561	0.0011	0.003	LG 0.00013	0.0003	0.0048	0.00027	0.2678
00036647	0.0036	0.004	0.00049	0.0002	0.0131	0.00032	0.7421
00036724	0.0076	0.001	0.00095	0.0004	0.0034	0.00027	0.5816
00036804	0.0053	0.003	0.00060	0.0004	0.0067	0.00018	0.5835
00036868	0.0050	0.002	0.00051	0.0005	LG 0.0023	0.00021	0.4529
00036932	0.0033	0.002	0.00079	0.0005	LG 0.0022	0.00021	0.7562
00037007	0.0062	0.002	0.00144	0.0004	LG 0.0012	D 0.00058	0.5319
00037075	0.0035	0.003	0.00273	0.0013	0.0035	0.00012	0.6082
00037148	0.0033	0.002	0.00066	0.0009	0.0034	0.00004	0.8675
00081031	LG 0.0009	LG 0.000	0.00896	0.0054	0.0066	0.01581	0.7180
00081065	0.0040	0.002	LG 0.00013	0.0003	UG 0.0357	0.01032	0.5692
00081089	0.0019	0.004	0.00087	0.0003	0.0146	0.00641	0.4251
00081114	LG 0.0008	0.001	0.00046	0.0003	0.0302	0.00201	0.6621

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION-NE STATION-MOOSONEE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00036562	AP02131	AS	02	01	FEB 2, 1987	DEC 30, 1986	1300	1330	1	102537	
00036648	AP02175	AS	02	01	FEB 25, 1987	FEB 2, 1987	1300	1300	1	66307	
00036805	AP02210	AS	02	01	APR 15, 1987	FEB 25, 1987	1723	1300	1	150146	
00036869	AP02233	AS	02	01	MAY 19, 1987	APR 15, 1987	1230	1723	1	93313	
00036933	AP02246	AS	02	01	JUN 16, 1987	MAY 19, 1987	1900	1230	1	76636	
00037008	AP02284	AS	02	01	JUL 15, 1987	JUN 16, 1987	1831	1900	1	78162	
00037076	AP02300	AS	02	01	AUG 11, 1987	JUL 15, 1987	1937	1831	1	39081	
00037149	AP02320	AS	02	01	SEP 8, 1987	AUG 11, 1987	2000	1937	1	63990	
00081032	AP02352	AS	02	01	OCT 6, 1987	SEP 8, 1987	1730	2000	1	76898	
00081066	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	1730	1730	1	81378	
00081090	AP02414	AS	02	01	DEC 1, 1987	NOV 3, 1987	1230	1730	1	65981	
00081115	AP02432	AS	02	01	DEC 29, 1987	DEC 1, 1987	1730	1230	1	85398	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00036562			Z	1.47	1.19	UG 0.161	0.063	0.051
00036648			Z	0.87	1.13	0.029	0.045	0.093
00036805			Z	0.86	1.35	0.033	0.040	0.253
00036869			Z	0.68	1.43	<T 0.021	0.043	0.249
00036933				0.66	1.08	<T 0.016	0.039	0.835
00037008		B		<T 0.19	0.63	<T 0.013	<W 0.006	0.825
00037076		B		0.45	0.54	<T 0.019	<W 0.013	0.217
00037149				<T 0.31	0.60	<T 0.016	<T 0.031	0.141
00081032				0.47	0.83	0.016	<T 0.020	0.179
00081066				0.38	0.60	0.015	<T 0.025	0.080
00081090				0.54	UG 3.50	0.027	0.114	UG 1.591
00081115				1.25	1.22	0.025	0.035	0.023

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION-NE STATION-MOOSONEE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00036562	0.468	0.024	0.401	0.013	0.012	0.061	0.003
00036648	0.287	0.029	0.221	0.021	0.028	0.051	0.001
00036805	0.117	0.017	0.138	0.022	0.007	0.034	0.006
00036869	LG 0.113	0.018	0.130	0.055	0.066	0.053	0.005
00036933	0.189	0.031	0.164	0.064	0.120	0.104	0.018
00037008	0.390	0.059	UG 0.230	0.051	0.087	0.115	0.001
00037076	0.294	0.068	0.178	0.040	0.026	0.065	0.003
00037149	0.203	0.045	0.158	0.033	0.018	0.031	< 0.001
00081032	0.312	0.031	0.185	LG 0.005	0.024	0.051	0.006
00081066	0.258	<T 0.010	0.155	0.033	0.010	0.031	0.003
00081090	0.561	U 147.012	0.432	0.079	0.058	0.209	0.005
00081115	0.182	0.009	0.167	0.006	0.011	0.041	0.001

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00036562	0.0005	0.001	0.00010	0.0002	0.0005	0.00016	0.1853
00036648	0.0008	0.001	0.00045	0.0003	0.0026	0.00029	0.5882
00036805	0.0013	0.001	0.00013	0.0002	0.0026	0.00009	0.4929
00036869	0.0015	0.002	0.00118	0.0010	0.0014	0.00020	0.5069
00036933	0.0012	0.001	0.00091	0.0007	0.0063	0.00021	0.4828
00037008	0.0028	0.001	0.00141	0.0004	0.0010	0.00014	0.2111
00037076	< 0.0013	0.003	0.00537	0.0023	< 0.0013	0.00020	0.4094
00037149	0.0008	0.002	0.02766	0.0017	0.0025	< 0.00002	0.3672
00081032	0.0010	0.001	0.00910	0.0007	0.0052	0.01196	0.4682
00081066	0.0006	0.001	0.00012	0.0006	0.0329	0.00774	0.4031
00081090	0.0030	UG 0.006	0.00061	0.0023	0.0205	0.01349	0.5274
00081115	0.0006	0.001	0.00047	0.0002	0.0006	0.00105	0.5422

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=TURKEY LAKES LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00036558	AP02131	AS	02	01	JAN 27, 1987	DEC 30, 1986	1200	1030	1	78850	
00036644	AP02175	AS	02	01	FEB 24, 1987	JAN 27, 1987	1045	1200	1	78023	
00036721	AP02182	AS	02	01	MAR 24, 1987	FEB 24, 1987	1135	1045	1	79406	
00036801	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	1102	1135	1	78730	
00036865	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	0855	1102	1	78727	
00036929	AP02246	AS	02	01	JUN 16, 1987	MAY 19, 1987	0853	0855	1	80696	
00037004	AP02284	AS	02	01	JUL 14, 1987	JUN 16, 1987	1120	0853	1	77303	
00037072	AP02300	AS	02	01	AUG 11, 1987	JUL 14, 1987	1130	1120	1	79900	
00037145	AP02320	AS	02	01	SEP 8, 1987	AUG 11, 1987	1000	1130	1	75152	
00081028	AP02352	AS	02	01	OCT 6, 1987	SEP 8, 1987	1130	1000	1	74091	
00081062	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	1030	1130	1	74989	
00081086	AP02414	AS	02	01	DEC 1, 1987	NOV 3, 1987	1200	1030	1	75444	
00081112	AP02432	AS	02	01	DEC 29, 1987	DEC 1, 1987	1230	1200	1	71212	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00036558				4.53	1.90	0.171	0.216	0.089
00036644				9.13	1.92	0.205	0.314	0.099
00036721				4.81	2.08	0.101	0.252	0.101
00036801				3.48	3.00	0.156	0.318	0.387
00036865				1.82	1.38	0.035	0.127	0.521
00036929				1.04	2.63	0.081	0.124	0.328
00037004		B		1.32	2.69	0.068	0.071	0.265
00037072				1.06	2.55	0.072	0.075	0.150
00037145		A		1.62	3.35	0.070	0.100	0.100
00081028				1.21	2.12	0.054	0.101	0.163
00081062				1.55	1.60	0.107	0.147	0.140
00081086				2.53	1.35	0.083	0.159	0.119
00081112		B		2.17	1.12	0.056	0.119	0.028

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=TURKEY LAKES LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00036558	0.317	0.030	0.219	0.047	0.027	0.030	0.003
00036644	0.135	0.033	0.124	0.048	0.032	0.029	0.003
00036721	0.157	0.025	0.102	0.039	0.044	0.020	0.004
00036801	0.171	0.041	0.100	0.102	0.019	0.049	0.016
00036865	0.146	0.036	0.097	0.151	0.152	0.074	0.023
00036929	0.149	0.055	0.129	0.063	0.103	0.057	0.008
00037004	0.155	0.081	0.096	0.097	0.129	0.046	0.001
00037072	0.131	0.081	0.089	0.077	0.057	0.039	0.008
00037145	0.186	UG 0.161	0.113	0.086	0.064	0.033	< 0.001
00081028	0.162	0.065	0.090	LG 0.007	0.050	0.045	0.002
00081062	0.187	0.039	0.097	0.079	0.034	0.041	0.003
00081086	0.292	0.045	0.122	0.044	0.034	0.027	0.002
00081112	0.140	LG 0.009	0.104	LG 0.002	0.010	0.035	LG 0.001

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00036558	0.0030	0.002	LG 0.00013	0.0003	0.0046	0.00027	0.3297
00036644	0.0041	0.002	0.00051	0.0003	0.0115	0.00031	1.2945
00036721	0.0044	0.002	0.00063	< 0.0003	0.0044	0.00030	0.9823
00036801	0.0065	0.002	0.00064	0.0004	0.0095	0.00036	1.0263
00036865	0.0051	LG 0.001	0.00089	0.0006	0.0037	D 0.00104	0.6161
00036929	0.0031	LG 0.000	0.00124	0.0004	0.0066	0.00033	0.9170
00037004	0.0061	0.003	0.00181	0.0008	0.0056	0.00019	0.8900
00037072	0.0035	0.004	0.00338	0.0014	0.0065	0.00014	0.8548
00037145	0.0035	0.002	0.00106	0.0019	0.0051	< 0.00001	1.2016
00081028	0.0040	0.002	UG 0.01093	0.0008	0.0108	0.01795	0.8813
00081062	0.0040	0.002	0.00080	0.0009	0.0053	0.00987	0.7468
00081086	0.0027	0.001	0.00159	0.0007	0.0066	0.01339	0.6362
00081112	0.0011	0.001	0.00028	0.0003	LG 0.0007	0.00140	0.8187

PART V

NORTHWESTERN REGION CUMULATIVE AMBIENT AIR RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=DORION LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00034088	AP02144	AS	02	01	JAN 27, 1987	DEC 30, 1986	0908	0939	1	83421	
00034090	AP02164	AS	02	01	FEB 24, 1987	JAN 27, 1987	0845	0913	1	81917	
00034093	AP02182	AS	02	01	MAR 24, 1987	FEB 24, 1987	0857	0849	1	70261	
00034095	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	0907	0902	1	74508	
00034097	AP02246	AS	02	01	MAY 19, 1987	APR 21, 1987	0910	0908	1	72751	
00034099	AP02246	AS	02	01	JUN 16, 1987	MAY 19, 1987	0905	0910	1	85888	
00032851	AP02300	AS	02	01	JUL 14, 1987	JUN 16, 1987	0904	0906	1	73527	
00032853	AP02313	AS	02	01	AUG 11, 1987	JUL 14, 1987	0913	0904	1	56119	
00032855	AP02325	AS	02	01	SEP 8, 1987	AUG 11, 1987	0920	0915	1	63926	
00085001	AP02361	AS	02	01	OCT 6, 1987	SEP 8, 1987	0900	0926	1	73603	
00085003	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	0905	0914	1	75324	
00085005	AP02414	AS	02	01	DEC 1, 1987	NOV 3, 1987	0908	0910	1	77137	
00085007	AP02443	AS	02	01	DEC 29, 1987	DEC 1, 1987	0833	0912	1	77736	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3
00034088		A			1.13		0.48		0.087		0.078	0.044
00034090					0.89		1.86	<W	0.003		0.226	0.104
00034093		B			1.78		2.11		0.117		0.228	0.128
00034095		BQ			1.15		2.27		0.044		0.128	UG 0.638
00034097		BA			0.63		0.91	<T	0.021		0.069	0.543
00034099				<T	0.25		0.54	<T	0.023		0.041	0.428
00032851		B		<T	0.25		0.67		0.031	<T	0.034	0.109
00032853		A		<T	0.33		0.78		0.053		0.062	0.303
00032855		A			0.39		1.26		0.043		0.047	0.282
00085001					0.37		1.03		0.031		0.054	0.204
00085003					0.53		0.64		0.037		0.053	0.046
00085005		E			0.53		1.79	<W	0.003		0.136	0.130
00085007				LG	0.27	LG	0.39	<W	0.003	<T	0.039	0.026

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=DORION LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00034088	0.192	0.010	0.072	0.043	0.011	0.011	0.001
00034090	0.128	0.045	0.151	0.040	0.017	0.028	0.006
00034093	0.157	0.028	0.112	0.046	0.116	0.078	0.004
00034095	0.101	0.034	0.113	0.152	0.027	0.144	0.018
00034097	0.124	0.045	0.100	0.139	0.361	0.223	0.016
00034099	0.087	0.125	B 0.278	0.046	0.106	0.075	0.014
00032851	0.095	0.071	0.067	0.085	0.199	0.158	0.002
00032853	0.089	UG 0.257	0.114	0.116	0.268	0.190	0.006
00032855	0.117	0.111	0.107	0.061	0.119	0.110	< 0.001
00085001	0.136	0.100	0.084	0.068	0.081	0.084	0.006
00085003	0.133	0.015	0.065	0.038	0.022	0.032	0.002
00085005	0.389	B 0.713	B 1.216	0.086	0.008	0.097	0.002
00085007	0.116	LG 0.001	0.062	LG 0.003	0.013	0.006	0.009

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00034088	0.0006	B 0.030	D 0.00048	0.0002	0.0006	0.00020	0.9710
00034090	0.0017	0.002	0.00073	0.0005	0.0066	0.00043	<W 0.0122
00034093	0.0043	0.003	0.00057	< 0.0003	0.0034	0.00037	1.1386
00034095	0.0055	0.001	0.00040	0.0005	0.0052	0.00027	0.6080
00034097	0.0044	0.001	0.00316	0.0004	0.0074	0.00025	0.4027
00034099	0.0017	0.001	0.00105	0.0005	0.0024	0.00015	0.2713
00032851	0.0041	0.002	0.00190	0.0007	0.0018	0.00005	0.2856
00032853	0.0048	0.001	0.00053	< 0.0004	0.0032	0.00023	0.4508
00032855	0.0028	0.001	0.00235	0.0014	0.0036	0.00034	0.4458
00085001	0.0048	0.001	0.00095	0.0005	0.0007	0.01685	0.4049
00085003	LG 0.0011	0.001	LG 0.00013	0.0008	0.0007	0.01168	0.6372
00085005	0.0039	0.001	0.00246	0.0010	D 0.0078	0.00985	0.4836
00085007	0.0006	0.001	0.00206	0.0003	0.0006	0.00142	LG 0.0579

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=EAR FALLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00034286	AP02144	AS	02	01	JAN 27, 1987	DEC 30, 1986	0900	0915	1	81968	
00034287	AP02164	AS	02	01	FEB 24, 1987	JAN 27, 1987	0930	0900	1	81092	
00034288	AP02182	AS	02	01	MAR 24, 1987	FEB 24, 1987	0900	0930	1	84526	
00034289	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	0900	0900	1	73551	
00034290	AP02246	AS	02	01	MAY 19, 1987	APR 21, 1987	1000	0900	1	27951	
00034291	AP02246	AS	02	01	JUN 16, 1987	MAY 19, 1987	0900	1000	1	75463	
00034292	AP02300	AS	02	01	JUL 16, 1987	JUN 16, 1987	1000	0900	1	85164	
00034293	AP02313	AS	02	01	AUG 11, 1987	JUL 16, 1987	0900	1000	1	73606	
00034294	AP02325	AS	02	01	SEP 8, 1987	AUG 11, 1987	0900	0900	1	80989	
00034295	AP02361	AS	02	01	OCT 6, 1987	SEP 8, 1987	0900	0900	1	82270	
00034296	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	0900	0900	1	85086	
00034298	AP02414	AS	02	01	DEC 1, 1987	NOV 3, 1987	0900	0900	1	82687	
00034299	AP02443	AS	02	01	DEC 29, 1987	DEC 1, 1987	0900	0900	1	80544	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00034286					0.73		1.22		0.073		0.195		0.108
00034287					0.74		1.85		0.089		0.099		0.092
00034288					1.59		2.22		0.095		0.154		0.089
00034289					0.82		0.58	<T	0.027		0.068		0.367
00034290		A	F	U	0.66	U	0.79	U	0.045	U	0.089	U	0.592
00034291				<T	0.30		0.95		0.036		0.066		0.292
00034292		QA	Z		0.28		0.87		0.035		0.047		0.188
00034293			Z	<T	0.25		0.50		0.027		0.048		0.104
00034294					0.28		0.98		0.025		0.043		0.303
00034295					0.27		0.73		0.021		0.036		0.158
00034296				<T	0.26		0.71		0.035		0.047		0.082
00034298					0.78		0.54		0.045		0.060		0.060
00034299		A			0.93		0.67	<T	0.006		0.087		0.025

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=EAR FALLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00034286	UG 0.451	0.034	0.303	0.043	0.035	0.071	0.005
00034287	0.086	0.057	0.128	0.030	0.010	0.015	0.004
00034288	0.225	0.030	0.223	0.091	0.093	0.042	0.003
00034289	0.129	0.020	0.103	UG 0.193	0.032	0.050	0.015
00034290	U 0.322	U 0.041	U 0.231	U 0.111	U 0.302	U 0.103	U 0.015
00034291	D 0.212	0.070	0.091	0.113	0.203	0.070	0.007
00034292	0.100	0.093	0.087	0.123	0.148	0.063	0.009
00034293	0.082	0.125	0.069	0.065	0.054	0.041	< 0.001
00034294	0.105	0.168	0.090	****	0.091	0.062	0.005
00034295	0.146	0.063	0.086	0.032	0.039	0.032	0.006
00034296	0.147	0.024	0.090	0.052	0.033	0.026	D 0.006
00034298	0.230	0.067	0.114	0.044	0.027	0.018	D 0.006
00034299	0.174	0.009	0.088	0.022	0.017	0.006	0.001

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00034286	D 0.0018	0.001	0.00037	0.0002	0.0028	D 0.00051	0.5612
00034287	0.0014	0.000	0.00111	0.0002	0.0036	0.00033	0.6659
00034288	0.0043	0.001	0.00083	< 0.0002	0.0046	0.00027	1.0529
00034289	0.0039	< 0.000	0.00041	0.0005	0.0026	0.00022	0.5003
00034290	U 0.0018	U 0.001	U 0.00322	U 0.0011	U 0.0032	U 0.00047	U 0.6368
00034291	0.0041	0.002	0.00106	0.0004	0.0040	0.00017	0.2491
00034292	0.0038	0.002	0.00317	0.0008	0.0045	D 0.00028	0.3264
00034293	0.0023	0.001	0.00082	< 0.0003	0.0018	0.00018	0.3437
00034294	0.0025	LG 0.000	0.00074	0.0010	0.0030	0.00027	0.2877
00034295	0.0024	0.001	0.00681	0.0005	0.0006	0.01094	0.2528
00034296	D 0.0065	0.001	UG 0.03632	0.0005	0.0021	0.00975	0.3526
00034298	0.0012	LG 0.000	0.00254	0.0006	0.0006	0.00798	0.5539
00034299	0.0010	D 0.004	0.00050	0.0002	0.0006	0.00174	0.1775

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=GERALDTON LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00032775	AP02144	AS	02	01	JAN 27, 1987	DEC 30, 1986	1630	1630	1	84300	
00032776	AP02164	AS	02	01	FEB 24, 1987	JAN 27, 1987	1540	1630	1	85541	
00032777	AP02182	AS	02	01	MAR 23, 1987	FEB 24, 1987	1940	1540	1	84351	
00032778	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	1845	1320	1	86382	
00032779	AP02246	AS	02	01	MAY 19, 1987	APR 21, 1987	1306	1845	1	85407	
00032780	AP02246	AS	02	01	JUN 15, 1987	MAY 19, 1987	1522	1306	1	74734	
00032781	AP02300	AS	02	01	JUL 14, 1987	JUN 16, 1987	1340	1351	1	80967	
00032782	AP02313	AS	02	01	AUG 11, 1987	JUL 14, 1987	1600	1340	1	85295	
00032783	AP02325	AS	02	01	SEP 8, 1987	AUG 11, 1987	1220	1600	1	81101	
00032784	AP02361	AS	02	01	OCT 6, 1987	SEP 8, 1987	1235	1220	1	82690	
00032785	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	1203	1235	1	81205	
00032787	AP02414	AS	02	01	DEC 1, 1987	NOV 3, 1987	1440	1203	1	86976	
00032788	AP02443	AS	02	01	DEC 29, 1987	DEC 1, 1987	1650	1440	1	68603	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX		SULFATE		NITRIC		NITRATE		CALCIUM
				UG/M3		UG/M3		UG/M3		UG/M3		UG/M3
00032775				<W	0.02	<T	0.02	D	0.003	D	0.006	0.030
00032776					2.48		2.01		0.146		0.228	0.151
00032777		A			1.72		1.66		0.056		0.172	UG 0.628
00032778		B			0.91		1.56		0.032		0.098	0.278
00032779				<T	0.29	LG	0.32	<T	0.015		0.041	0.246
00032780		A			0.45		1.20		0.043		0.067	0.388
00032781					0.42		1.40		0.043		0.049	0.364
00032782				<W	0.06	<T	0.03	<T	0.012	<T	0.023	< 0.012
00032783					0.37		1.06		0.028		0.049	0.290
00032784				<T	0.35		0.52		0.027	<T	0.030	0.236
00032785					0.38		0.47		0.028	<T	0.031	0.043
00032787		A		<T	0.16	<T	0.10	<W	0.003	<T	0.017	0.023
00032788		A			0.68		0.82	<W	0.003		0.087	0.029

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=GERALDTON LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00032775	0.113	<W 0.002	LG 0.032	0.010	0.009	0.007	0.001
00032776	D 0.245	0.069	D 0.234	0.032	0.013	D 0.049	0.003
00032777	0.124	0.045	0.114	0.068	0.085	0.104	0.001
00032778	0.081	0.035	0.093	0.111	< 0.003	0.042	0.006
00032779	0.094	0.013	0.073	0.023	0.022	0.012	0.008
00032780	0.087	0.038	0.106	0.050	0.106	0.061	0.011
00032781	0.099	0.089	0.075	0.072	0.032	0.074	0.005
00032782	LG 0.059	0.033	LG 0.052	LG 0.011	LG 0.007	< 0.003	0.003
00032783	0.080	UG 0.387	0.108	0.038	0.040	0.043	< 0.001
00032784	D 0.091	0.019	0.071	0.151	0.150	0.085	0.010
00032785	0.123	<T 0.008	0.075	0.025	0.010	0.017	0.001
00032787	0.121	0.060	0.177	0.016	0.072	0.007	0.003
00032788	0.131	0.009	0.082	LG 0.003	0.011	0.011	0.002

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00032775	0.0006	0.000	0.00036	0.0002	0.0006	0.00021	<W 0.0119
00032776	0.0015	0.001	0.00082	0.0004	0.0055	0.00041	1.4028
00032777	0.0044	0.001	0.00119	< 0.0002	0.0037	0.00032	0.8773
00032778	0.0036	< 0.000	0.00081	< 0.0002	0.0030	0.00008	0.4897
00032779	< 0.0006	< 0.000	0.00176	0.0005	0.0012	0.00015	0.3103
00032780	0.0023	0.000	0.00120	0.0005	0.0044	0.00017	0.4483
00032781	0.0023	0.001	0.00296	0.0012	0.0020	0.00010	0.4236
00032782	< 0.0006	B 0.010	0.00023	0.0007	0.0019	0.00027	LG 0.0674
00032783	LG 0.0010	0.001	0.00210	0.0010	0.0021	0.00025	0.4168
00032784	0.0060	UG 0.010	0.00242	0.0005	0.0054	0.01258	0.4390
00032785	LG 0.0006	0.002	0.00062	0.0009	0.0006	0.00837	0.4901
00032787	0.0006	LG 0.000	0.00207	0.0011	0.0006	0.01184	0.1897
00032788	0.0007	0.001	0.00102	0.0003	0.0007	0.00102	LG 0.0984

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=OTTER ISLAND LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00031088	AP02246	AS	02	01	MAY 19, 1987	APR 21, 1987	0900	1400	1	80292	
00031089	AP02216	AS	02	01	JUN 16, 1987	MAY 19, 1987	0900	0900	1	79761	
00031090	AP02300		02	01	JUL 14, 1987	JUN 16, 1987	0900	0900	1	78671	
00031091	AP02313	AS	02	01	AUG 11, 1987	JUL 14, 1987	0900	0900	1	78750	
00031092	AP02325	AS	02	01	SEP 8, 1987	AUG 11, 1987	0900	0900	1	78563	
00031093	AP02390	AS	02	01	OCT 6, 1987	SEP 8, 1987	0900	0900	1	48216	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX	SULFATE	NITRIC	NITRATE	CALCIUM
				UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00031088				1.59	1.02	0.040	0.112	0.205
00031089				0.89	0.61	0.044	0.088	0.146
00031090			X	****	****	****	****	****
00031091		B		D 0.88	0.37	0.035	0.070	0.089
00031092				0.65	0.90	D 0.041	D 0.083	0.064
00031093		A		0.65	0.46	0.031	0.073	0.041

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00031088	0.081	0.024	0.080	0.053	0.113	0.058	0.004
00031089	0.088	0.014	0.079	0.019	0.028	< 0.003	0.005
00031090	****	****	****	****	****	****	****

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=PICKLE LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00034380	AP02144	AS	02	01	JAN 27, 1987	DEC 30, 1986	1330	1030	1	87884	
00034381	AP02164	AS	02	01	FEB 24, 1987	JAN 27, 1987	1500	1330	1	90049	
00034382	AP02182	AS	02	01	MAR 25, 1987	FEB 24, 1987	1500	1500	1	92335	
00034383	AP02210	AS	02	01	APR 21, 1987	MAR 25, 1987	1530	1500	1	83498	
00034384	AP02246	AS	02	01	MAY 19, 1987	APR 21, 1987	1400	1530	1	83200	
00034385	AP02246	AS	02	01	JUN 17, 1987	MAY 19, 1987	1430	1400	1	83916	
00034386	AP02300	AS	02	01	JUL 14, 1987	JUN 17, 1987	1400	1430	1	77736	
00034387	AP02313	AS	02	01	AUG 11, 1987	JUL 14, 1987	1430	1430	1	81583	
00034388	AP02325	AS	02	01	SEP 8, 1987	AUG 11, 1987	0930	1430	1	80245	
00034389	AP02361	AS	02	01	OCT 6, 1987	SEP 8, 1987	1430	0930	1	94798	
00034390	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	1430	1430	1	57992	
00034391	AP02414	AS	02	01	DEC 1, 1987	NOV 3, 1987	1215	1430	1	83841	
00034392	AP02443	AS	02	01	DEC 29, 1987	DEC 1, 1987	1045	1215	1	86880	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00034380		Q		0.72	1.34	0.065	0.148	0.105
00034381				1.61	1.24	0.078	0.083	0.047
00034382				1.59	1.93	0.054	0.103	0.340
00034383				0.73	1.65	<T 0.027	0.084	UG 0.695
00034384				0.35	1.02	<T 0.015	0.054	0.757
00034385				0.39	0.96	<T 0.024	0.048	0.596
00034386				<T 0.17	0.58	0.019	0.039	0.643
00034387				0.21	<T 0.04	0.015	<T 0.025	0.142
00034388				<W 0.22	0.77	0.019	0.044	0.530
00034389				0.25	0.64	0.016	<T 0.026	0.385
00034390		A		<W 0.24	0.74	0.026	<T 0.026	0.112
00034391		E		0.42	1.12	<T 0.009	0.072	0.155
00034392		A		1.26	1.11	<T 0.006	0.069	0.023

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=PICKLE LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00034380	UG 0.529	0.034	UG 0.379	0.030	0.031	0.091	D 0.011
00034381	0.100	0.063	0.122	0.019	0.006	0.011	0.008
00034382	0.135	0.024	0.131	0.109	0.083	0.079	D 0.008
00034383	0.204	0.026	0.205	UG 0.293	0.039	0.144	0.013
00034384	0.144	0.026	0.122	0.309	0.367	0.198	0.008
00034385	0.119	0.042	0.096	D 0.214	0.278	0.137	0.007
00034386	D 0.148	0.092	0.109	D 0.339	0.304	0.219	0.007
00034387	0.092	0.045	0.063	0.040	0.028	0.018	< 0.001
00034388	0.143	0.080	0.094	D 0.156	0.132	0.125	0.008
00034389	0.153	0.026	0.075	0.150	0.125	0.122	D 0.023
00034390	B 0.259	<T 0.016	B 0.164	0.090	D 0.089	0.057	0.001
00034391	0.268	0.057	0.229	0.064	0.044	0.051	0.002
00034392	0.121	0.013	0.066	LG 0.005	0.010	0.006	0.005

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00034380	0.0006	0.001	0.00034	0.0002	0.0018	0.00020	0.5917
00034381	D 0.0006	0.001	0.00056	0.0002	0.0030	0.00024	1.3437
00034382	0.0039	0.003	0.00097	< 0.0002	0.0029	0.00024	0.8556
00034383	0.0071	D 0.004	D 0.00180	0.0007	0.0036	0.00023	0.3773
00034384	0.0067	B 0.011	0.00433	< 0.0002	0.0023	0.00020	0.2800
00034385	0.0046	D 0.004	0.00417	0.0006	0.0018	0.00015	0.3492
00034386	D 0.0068	B 0.015	0.00399	0.0005	0.0024	0.00010	0.2033
00034387	< 0.0006	0.001	0.00037	0.0007	< 0.0006	0.00010	LG 0.1569
00034388	0.0032	D 0.006	0.00162	0.0007	0.0022	0.00022	0.3115
00034389	0.0053	UG 0.008	0.00506	0.0004	0.0008	0.01181	0.2215
00034390	0.0026	0.003	LG 0.00017	0.0009	0.0009	0.01000	0.3328
00034391	0.0012	0.001	0.00346	0.0011	0.0016	0.00954	0.3733
00034392	0.0009	0.001	0.00322	0.0002	0.0015	0.00092	LG 0.0748

ONTARIO MINISTRY OF THE ENVIRONMENT
AP10S - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION-QUETICO CENTRE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00032663	AP02144	AS	02	01	JAN 27, 1987	DEC 30, 1986	0900	0900	1	85472	
00032664	AP02164	AS	02	01	FEB 24, 1987	JAN 27, 1987	0900	0900	1	78303	
00032665	AP02182	AS	02	01	MAR 24, 1987	FEB 24, 1987	0900	0900	1	81956	
00032666	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	0900	0900	1	80162	
00032667	AP02246	AS	02	01	MAY 19, 1987	APR 21, 1987	0900	0900	1	22827	
00032668	AP02246	AS	02	01	JUN 16, 1987	MAY 19, 1987	0900	0900	1	79198	
00032669	AP02300	AS	02	01	JUL 14, 1987	JUN 16, 1987	0900	0900	1	78570	
00032671	AP02313	AS	02	01	AUG 11, 1987	JUL 14, 1987	0900	0900	1	73336	
00032672	AP02325	AS	02	01	SEP 8, 1987	AUG 11, 1987	0900	0900	1	76891	
00032673	AP02361	AS	02	01	OCT 6, 1987	SEP 8, 1987	0900	0900	1	81319	
00032674	AP02390	AS	02	01	NOV 3, 1987	OCT 6, 1987	0900	0900	1	83293	
00032675	AP02414	AS	02	01	DEC 1, 1987	NOV 3, 1987	0900	0900	1	84344	
00032676	AP02443	AS	02	01	DEC 29, 1987	DEC 1, 1987	0900	0900	1	89038	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00032663				0.92	0.73	0.137	0.076	0.058
00032664				1.15	1.94	0.099	0.236	0.084
00032665		D		1.75	2.17	0.085	0.275	0.085
00032666		D		1.13	1.35	0.044	0.112	0.256
00032667		A	F	U 1.15	U 1.64	U 0.044	U 0.175	U 1.402
00032668				0.39	0.73	0.044	0.051	0.341
00032669				0.67	1.15	0.057	0.057	0.076
00032671		B		<T 0.36	0.93	0.055	0.061	0.157
00032672				0.44	1.46	0.036	0.052	0.234
00032673				<T 0.25	0.83	0.031	0.049	0.178
00032674				0.45	0.76	0.039	0.066	0.072
00032675				0.66	1.23	0.021	0.101	0.136
00032676				0.69	1.17	D 0.002	D 0.168	D 0.045

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION-QUETICO CENTRE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00032663	0.246	0.013	0.101	0.021	C.021	0.021	0.001
00032664	0.140	0.043	0.125	0.038	C.013	0.013	0.003
00032665	0.171	0.037	0.104	0.068	0.075	0.024	0.003
00032666	0.137	0.023	UG 0.334	0.172	0.023	0.045	0.011
00032667	U 0.832	U 0.055	U 0.429	U 0.333	U 0.537	U 0.144	U 0.036
00032668	0.088	0.045	UG 0.159	0.069	0.109	0.057	0.012
00032669	0.095	0.080	0.066	0.075	0.033	0.039	0.002
00032671	0.075	0.132	0.085	0.097	0.070	0.048	< 0.001
00032672	0.111	UG 0.252	0.089	0.057	0.045	0.039	0.010
00032673	0.166	0.068	0.077	0.067	0.038	0.054	0.005
00032674	0.126	0.015	0.074	0.054	0.029	0.026	0.001
00032675	0.136	0.057	0.198	0.070	0.007	0.026	0.002
00032676	0.118	0.025	0.076	0.031	0.021	0.008	0.001

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00032663	0.0006	0.000	0.00035	0.0002	0.0006	0.00020	1.2402
00032664	0.0015	0.001	0.00115	0.0003	0.0034	0.00032	0.8812
00032665	0.0046	0.002	0.00037	< 0.0002	0.0040	0.00034	1.1226
00032666	0.0049	< 0.000	< 0.00012	0.0004	0.0027	0.00010	D 1.0703
00032667	U 0.0088	U 0.002	U 0.00356	U 0.0013	U 0.0140	U 0.00088	U 0.6484
00032668	0.0021	0.001	0.00240	0.0005	0.0047	0.00018	0.3851
00032669	0.0033	0.003	0.00280	0.0010	0.0036	0.00009	UG 0.8184
00032671	0.0041	0.002	D 0.00177	< 0.0003	0.0040	0.00018	0.4568
00032672	0.0022	0.002	0.00104	0.0012	0.0034	0.00026	0.5202
00032673	0.0043	0.002	0.00049	0.0004	0.0010	0.01549	0.2865
00032674	0.0012	0.006	LG 0.00012	0.0007	0.0006	0.00876	0.5379
00032675	0.0024	D 0.001	0.00225	0.0013	0.0006	0.00391	0.4541
00032676	0.0009	0.001	0.00034	0.0002	0.0031	0.00079	LG 0.0927

PART VI

SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=CLOYNE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00094333	AP02131	AS	02	01	JAN 27, 1987	DEC 30, 1986	1245	1100	1	73202	
00094339	AP02175	AS	02	01	FEB 24, 1987	JAN 27, 1987	0800	1400	1	83587	
00094354	AP02210	AS	02	01	MAR 24, 1987	FEB 24, 1987	1100	0800	1	79289	
00106129	AP03182		02	01	APR 24, 1987	MAR 24, 1987	0800	1100	1	.	
00024612	AP02246	AS	02	01	MAY 19, 1987	APR 24, 1987	0645	0800	1	74942	
00024633	AP02284	AS	02	01	JUN 16, 1987	MAY 19, 1987	1700	1845	1	83785	
00024640	AP02307	AS	02	01	JUL 16, 1987	JUN 16, 1987	2000	1700	1	95237	
00106130	AP03182		02	01	AUG 21, 1987	JUL 16, 1987	0800	2000	1	.	
00024659	AP02443	AS	02	01	SEP 8, 1987	AUG 21, 1987	1700	1500	1	79033	
00024673	AP02467	AS	02	01	OCT 6, 1987	SEP 8, 1987	1530	1700	1	.	
00024660	AP02443	AS	02	01	DEC 1, 1987	NOV 3, 1987	1530	0900	1	76874	
00024671	AP02467	AS	02	01	DEC 29, 1987	DEC 1, 1987	1800	1530	1	.	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3
00094333					6.37		5.05		0.140		1.284	D	0.598
00094339					16.19		3.89		0.227		0.502		0.246
00094354					4.55		3.06		0.218		0.334		0.404
00106129		AF	Z		****		****		****		****		****
00024612			Z		2.54		2.70		0.070		0.247		0.854
00024633					1.98		6.03		0.119		0.245		0.272
00024640		A	Z		2.68		6.88		0.102		0.231	<	0.011
00106130		AF	Z		****		****		****		****		****
00024659		QA	FZ	U	0.40	U	0.21	U	0.006	U	0.013	U	97.048
00024673		F			****		****		****	!NR	****		****
00024660					4.26		2.35		0.134		0.299		0.260
00024671		F			****		****		****	!NR	****		****

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=CLOYNE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00094333	UG 1.072	UG 0.236	D 0.683	D 0.118	D 0.092	0.083	0.042
00094339	0.455	0.097	0.374	0.072	0.042	0.038	0.022
00094354	LG 0.227	0.083	0.218	0.114	LG 0.013	0.052	0.017
00106129	****	****	****	****	****	****	****
00024612	0.207	0.181	0.105	0.263	0.354	0.136	0.021
00024633	0.203	0.095	0.136	0.094	0.108	0.048	0.009
00024640	0.163	0.095	0.138	0.133	0.181	< 0.003	0.011
00106130	****	****	****	****	****	****	****
00024659	U 1.733	U 10.957	U 0.461	U 0.032	U 0.061	U 0.051	U 0.001
00024673	****	****	****	INR ****	****	****	****
00024660	0.260	0.074	0.165	LG 0.018	0.028	0.026	0.015
00024671	****	****	****	****	****	****	****

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00094333	B 0.0567	0.005	0.00533	B 0.0059	B 0.0403	0.00090	1.3524
00094339	0.0073	0.004	0.00167	0.0017	0.0200	0.00049	1.0528
00094354	0.0047	0.002	0.00050	0.0014	0.0180	0.00043	1.1855
00106129	****	****	****	****	****	****	****
00024612	0.0129	0.002	0.00160	0.0007	0.0145	0.00035	0.9140
00024633	0.0058	0.002	0.00143	0.0008	0.0130	0.00036	1.2055
00024640	0.0067	0.002	0.00252	0.0009	0.0121	0.00072	1.2180
00106130	****	****	****	****	****	****	****
00024659	U 0.0146	U 0.008	U 0.00291	U 0.0009	U 0.0285	U 0.00139	U 0.1265
00024673	****	****	****	****	****	****	****
00024660	0.0039	0.002	0.00078	0.0008	0.0299	0.00182	0.5203
00024671	****	****	****	****	****	****	****

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=DALHOUSIE MILLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00094332	AP02131	AS	02	01	JAN 27, 1987	DEC 30, 1986	0830	0900	1	91110	
00094338	AP02175	AS	02	01	FEB 24, 1987	JAN 27, 1987	0800	0900	1	92370	
00094350	AP02210	AS	02	01	MAR 25, 1987	FEB 24, 1987	1100	0800	1	91890	
00094351	AP02210	AS	02	01	APR 21, 1987	MAR 25, 1987	0800	1100	1	85820	
00024614	AP02246	AS	02	01	MAY 17, 1987	APR 21, 1987	0800	0800	1	79661	
00024628	AP02284	AS	02	01	JUN 16, 1987	MAY 19, 1987	0800	0900	1	79313	
00024641	AP02307	AS	02	01	JUL 14, 1987	JUN 16, 1987	1800	0900	1	85155	
00024648	AP02377	AS	02	01	AUG 12, 1987	JUL 14, 1987	0800	1900	1	83781	
00106126	AP03182		02	01	SEP 16, 1987	AUG 12, 1987	0830	0800	1	.	
00024649	AP02377	AS	02	01	OCT 6, 1987	SEP 16, 1987	0830	0830	1	60155	
00106127	AP03182		02	01	NOV 3, 1987	OCT 6, 1987	0800	0830	1	.	
00024657	AP02443	AS	02	01	DEC 1, 1987	NOV 3, 1987	0900	0800	1	88994	
00024666	AP02467	AS	02	01	DEC 29, 1987	DEC 1, 1987	0800	0900	1	89420	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3
00094332				4.16		2.74		0.173		0.417		0.092
00094338				3.31		3.81		0.165		0.855	D	0.736
00094350				3.33		3.49	D	0.141	D	1.110		1.328
00094351				5.49	B	5.72		0.132		0.705		1.159
00024614			Z	1.88	D	2.54		0.066		0.364		1.632
00024628				1.64		5.42		0.104		0.334		0.467
00024641				1.69		6.17		0.112		0.323		0.581
00024648				1.43		3.60		0.084		0.191		0.859
00106126		AF	Z	****		****		****		****		****
00024649			Z	1.89		2.89		0.066		0.241		0.798
00106127		AF		****		****		****		****		****
00024657				3.69		3.07		0.081		0.596		0.899
00024666				4.89		3.35	LG	0.036		0.693		0.584

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=DALHOUSIE MILLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00094332	0.406	0.162	0.460	0.038	0.033	0.022	0.015
00094338	D 0.985	0.137	B 0.606	0.091	D 0.104	0.082	D 0.034
00094350	D 0.789	0.074	D 0.436	0.176	0.027	0.094	0.036
00094351	0.454	B 6.117	0.247	UG 0.249	0.036	0.143	0.019
00024614	0.282	0.138	0.166	0.272	0.373	0.159	0.014
00024628	0.315	0.110	0.168	0.131	0.113	0.071	0.011
00024641	0.323	0.122	0.173	0.178	0.247	< 0.003	0.020
00024648	0.245	0.132	0.112	0.044	0.064	0.078	B 0.026
00106126	****	****	****	****	****	****	****
00024649	0.249	0.081	0.130	0.085	0.037	0.077	0.015
00106127	****	****	****	****	****	****	****
00024657	0.365	D 0.109	0.226	0.096	0.050	0.096	0.020
00024666	0.537	0.225	0.268	0.073	D 0.056	0.055	0.009

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00094332	0.0044	0.003	0.00132	0.0011	0.0081	0.00045	1.1415
00094338	D 0.0281	0.004	0.00422	D 0.0037	D 0.0274	0.00062	0.9635
00094350	0.0144	0.003	0.00098	0.0026	0.0359	0.00057	0.9849
00094351	D 0.0262	0.002	0.00186	0.0023	D 0.0454	D 0.00077	1.0639
00024614	0.0217	0.002	0.00226	0.0013	0.0180	0.00034	0.7507
00024628	0.0112	D 0.006	0.00164	0.0013	0.0142	0.00032	1.1537
00024641	B 0.0411	0.003	0.00282	0.0021	0.0278	0.00066	1.1332
00024648	0.0090	0.002	LG 0.00024	0.0006	D 0.0147	D 0.00227	0.8510
00106126	****	****	****	****	****	****	****
00024649	D 0.0224	0.005	LG 0.00017	0.0007	0.0183	0.00233	0.8528
00106127	****	****	****	****	****	****	****
00024657	D 0.0303	0.003	0.00124	D 0.0021	0.0371	0.00225	0.4944
00024666	D 0.0291	0.004	0.00112	0.0025	0.0313	0.00396	0.4809

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=GOLDEN LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00094337	AP02144	AS	02	01	JAN 27, 1987	DEC 30, 1986	1700	1205	1	60192	
00094340	AP02175	AS	02	01	FEB 25, 1987	JAN 27, 1987	1800	1705	1	78438	
00094352	AP02210	AS	02	01	MAR 24, 1987	FEB 25, 1987	0700	1805	1	74089	
00094353	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	0700	0705	1	48980	
00024621	AP02246	AS	02	01	MAY 19, 1987	APR 21, 1987	1830	0705	1	75553	
00024625	AP02284	AS	02	01	JUN 16, 1987	MAY 19, 1987	0700	1830	1	59664	
00024642	AP02307	AS	02	01	JUL 14, 1987	JUN 16, 1987	0700	0705	1	56627	
00024646	AP02332	AS	02	01	AUG 11, 1987	JUL 14, 1987	0700	0705	1	60510	
00024647	AP02332	AS	02	01	SEP 9, 1987	AUG 11, 1987	1900	0700	1	71280	
00024651	AP02377	AS	02	01	OCT 6, 1987	SEP 9, 1987	0730	1900	1	18753	
00024656	AP02443	AS	02	01	NOV 3, 1987	OCT 6, 1987	0700	0735	1	16258	
00024663	AP02443	AS	02	01	DEC 1, 1987	NOV 3, 1987	0700	0705	1	78688	
00024667	AP02467	AS	02	01	DEC 29, 1987	DEC 1, 1987	0700	0700	1	55043	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00094337				3.46		2.96		0.137		0.465		0.136	
00094340		Q		2.06		2.74		0.223		0.255		0.097	
00094352				3.12		2.16		0.146		0.209		0.452	
00094353		B		1.22	LG	2.92		0.102		0.265		0.909	
00024621				1.52		2.03		0.050		0.113		0.384	
00024625				1.44		4.66	D	0.088	D	0.109		0.217	
00024642				1.28		4.08		0.075	LG	0.062	<	0.018	
00024646				1.16		2.84		0.078	LG	0.050		0.149	
00024647		Q		1.90		5.57		0.084		0.084		0.098	
00024651		A	F	3.99	U	3.76	U	0.093	U	0.160	U	0.400	
00024656			F	7.70	U	8.43	D	0.400	D	1.722	U	0.594	
00024663		DE		3.13		1.89		0.098		0.254		0.369	
00024667		Q		3.05		2.47		0.086		0.291		0.089	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=GOLDEN LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00094337	0.324	B 0.377	0.277	0.046	0.035	0.057	0.027
00094340	0.115	0.087	0.187	0.032	0.022	0.033	0.010
00094352	0.155	0.050	0.165	0.020	< 0.003	0.038	0.020
00094353	0.174	UG 0.667	0.173	UG 0.190	0.025	0.115	0.019
00024621	0.139	0.121	0.095	0.135	0.213	0.100	0.009
00024625	0.243	0.135	0.179	0.090	0.095	0.054	0.008
00024642	0.212	0.155	0.161	0.102	0.144	< 0.004	0.012
00024646	0.182	0.096	0.121	0.086	0.110	0.058	0.010
00024647	0.196	B 0.993	0.097	0.101	0.035	0.050	0.012
00024651	U 0.320	U 0.069	U 0.224	U 0.093	U 0.074	U 0.061	U 0.004
00024656	U 0.738	U 0.563	U 0.431	U 0.123	U 0.082	U 0.108	U 0.031
00024663	0.222	0.059	0.153	0.039	0.021	0.114	0.006
00024667	0.227	0.175	0.119	0.035	0.018	0.045	0.005

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00094337	0.0063	D 0.004	0.00432	0.0012	0.0083	0.00047	1.2460
00094340	0.0041	0.004	0.00051	0.0011	0.0134	0.00042	1.2876
00094352	0.0038	0.002	0.00040	0.0012	0.0112	0.00040	1.3133
00094353	0.0086	B 0.001	0.00082	0.0016	0.0092	0.00047	1.0065
00024621	0.0073	0.001	0.00132	< 0.0003	0.0077	0.00025	0.7386
00024625	0.0055	0.002	0.00184	0.0008	0.0091	0.00042	1.2989
00024642	0.0055	0.003	0.00353	0.0009	0.0071	0.00064	1.3562
00024646	0.0036	0.002	0.00099	D 0.0017	0.0058	0.00026	0.9635
00024647	0.0041	0.003	0.00140	0.0018	0.0066	0.00031	1.5713
00024651	U 0.0027	U 0.002	U 0.00053	U 0.0011	U 0.0027	U 0.00800	U 1.5997
00024656	U 0.0123	U 0.012	U 0.00246	U 0.0012	U 0.0892	U 0.00923	U 2.7986
00024663	0.0051	0.002	0.00076	0.0008	0.0261	0.00191	0.7879
00024667	0.0033	0.005	0.00254	0.0011	0.0151	0.00449	0.8357

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=SMITHS FALLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00094336	AP02144	AS	02	01	JAN 27, 1987	DEC 30, 1986	0955	1315	1	51510	
00094341	AP02175	AS	02	01	FEB 24, 1987	JAN 27, 1987	1310	0955	1	82664	
00094348	AP02210	AS	02	01	MAR 24, 1987	FEB 24, 1987	1002	1310	1	79969	
00094349	AP02210	AS	02	01	APR 21, 1987	MAR 24, 1987	1000	1002	1	77305	
00024617	AP02246	AS	02	01	MAY 19, 1987	APR 21, 1987	0950	1000	1	77555	
00024630	AP02284	AS	02	01	JUN 16, 1987	MAY 19, 1987	1000	0950	1	71800	
00024644	AP02307	AS	02	01	JUL 14, 1987	JUN 16, 1987	1045	1000	1	69946	
00024643	AP02307	AS	02	01	AUG 11, 1987	JUL 14, 1987	1050	1045	1	66889	
00024645	AP02332	AS	02	01	SEP 8, 1987	AUG 11, 1987	1015	1050	1	74828	
00024650	AP02377	AS	02	01	OCT 6, 1987	SEP 8, 1987	0915	1015	1	74797	
00024658	AP02443	AS	02	01	NOV 3, 1987	OCT 6, 1987	1125	0915	1	77732	
00024674	AP02467	AS	02	01	DEC 1, 1987	NOV 3, 1987	1015	1125	1	78200	
00024675	AP02467	AS	02	01	DEC 30, 1987	DEC 1, 1987	1545	1015	1	82362	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE		NITRIC		NITRATE		CALCIUM
00094336				3.44		3.07		0.209		0.660		0.197
00094341				0.72	LG	0.94	LG	0.067		0.194		0.272
00094348				2.68		3.24		0.106		0.513		0.900
00094349				4.47		2.59		0.166		0.653		1.061
00024617				1.60		2.19		0.064		0.387		1.708
00024630				1.68		5.43		0.157		0.390	D	1.170
00024644		D		1.77		5.79		0.129		0.322	D	1.794
00024643				1.57		3.75		0.093		0.202		0.673
00024645				2.77		4.66		0.138		0.334	D	1.022
00024650				2.22		3.06		0.074		0.227		0.555
00024658				3.03		2.97		0.084		0.515		0.134
00024674				3.45		2.63		0.083		0.531	INR	****
00024675				3.42	LG	0.15	LG	0.055		0.498		0.532

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=SMITHS FALLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00094336	0.476	0.075	0.334	0.070	0.050	0.060	0.036
00094341	0.339	0.163	0.217	0.034	0.029	0.086	0.012
00094348	0.269	0.054	0.171	0.174	0.023	0.208	0.018
00094349	0.401	0.072	0.266	0.136	0.013	0.258	0.026
00024617	0.335	0.235	0.166	0.293	0.389	D 0.548	0.013
00024630	0.327	0.175	0.187	0.167	0.176	D 0.389	0.008
00024644	0.393	0.102	0.186	0.241	0.349	D 0.502	0.013
00024643	0.247	0.155	0.135	0.109	0.140	< 0.004	0.010
00024645	D 0.314	0.064	0.139	0.171	0.196	D 0.347	0.019
00024650	0.207	0.046	0.093	0.068	0.045	0.142	0.013
00024658	0.244	0.075	0.097	0.109	0.060	0.315	0.013
00024674	0.288	0.059	0.189	!NR ****	!NR ****	!NR ****	!NR ****
00024675	0.389	0.052	0.244	0.061	0.024	D 0.159	0.008

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00094336	0.0068	0.003	0.00233	0.0014	0.0089	0.00050	1.5143
00094341	0.0036	0.002	0.00097	LG 0.0002	0.0093	0.00029	0.7137
00094348	0.0140	LG 0.001	0.00100	0.0018	0.0206	0.00039	1.0567
00094349	0.0088	0.002	0.00065	0.0017	0.0188	0.00047	1.1034
00024617	0.0205	0.001	0.00284	0.0005	0.0161	0.00040	0.8446
00024630	0.0123	0.003	0.00153	0.0010	0.0125	0.00028	1.4903
00024644	0.0182	0.005	0.00157	0.0014	0.0129	0.00061	1.3196
00024643	0.0096	0.001	0.00299	0.0007	0.0067	0.00054	1.0958
00024645	D 0.0104	0.003	0.00120	0.0015	0.0144	0.00027	1.3498
00024650	0.0053	0.001	LG 0.00013	0.0005	0.0064	0.00241	1.0468
00024658	0.0116	0.002	0.00077	UG 0.0039	0.0232	0.00167	0.5699
00024674	!NR ****	!NR ****	!NR ****	!NR ****	!NR ****	!NR ****	0.6624
00024675	0.0067	0.003	0.00097	0.0012	0.0137	0.00237	0.5986

PART VII

SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=COLCHESTER LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00074288	AP02144	AS	02	01	JAN 27, 1987	DEC 30, 1986	0715	0830	1	79764	
00074304	AP02164	AS	02	01	FEB 24, 1987	JAN 27, 1987	0755	0720	1	83131	
00074330	AP02210	AS	02	01	MAR 24, 1987	FEB 24, 1987	0825	0755	1	68844	
00074346	AP02233	AS	02	01	APR 21, 1987	MAR 24, 1987	0710	0836	1	79792	
00074352	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	0730	0715	1	66562	
00074368	AP02284	AS	02	01	JUN 16, 1987	MAY 19, 1987	1230	0730	1	66461	
00074385	AP02284	AS	02	01	JUL 14, 1987	JUN 16, 1987	0905	1230	1	64152	
00074399	AP02307	AS	02	01	AUG 11, 1987	JUL 14, 1987	0715	0915	1	62505	
00074422	AP02325	AS	02	01	SEP 8, 1987	AUG 11, 1987	0800	0720	1	66139	
00074427	AP02359	AS	02	01	OCT 6, 1987	SEP 8, 1987	0720	0800	1	76084	
00074450	AP02400	AS	02	01	NOV 3, 1987	OCT 6, 1987	0740	0720	1	84824	
00063796	AP02411	AS	02	01	DEC 1, 1987	NOV 3, 1987	0800	1130	1	75918	
00074456	AP02445	AS	02	01	DEC 29, 1987	DEC 1, 1987	0740	0800	1	79608	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00074288				18.39		5.17	UG	0.473	0.903	0.453
00074304				UG 21.97		4.72		0.310	1.335	0.804
00074330		A		17.91		4.02		0.218	1.220	0.886
00074346				11.24		5.93		0.238	1.247	0.662
00074352		B		12.40		4.18		0.158	1.059	1.405
00074368		C		12.39		9.48		0.305	1.625	1.151
00074385		AB		9.76		10.44		0.296	1.192	0.951
00074399		B		9.94		14.32		0.704	1.008	1.072
00074422				8.20		7.53		0.454	0.854	1.119
00074427		Q		10.19		LG 0.13		0.247	1.183	0.815
00074450				10.16		4.72		0.228	1.214	0.666
00063796				9.76		3.65		0.132	0.915	0.619
00074456				B 41.15		3.45		0.198	0.791	0.362

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=COLCHESTER LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00074288	1.091	0.108	0.303	0.175	0.078	0.104	0.072
00074304	1.083	0.103	0.379	0.204	0.078	0.168	0.030
00074330	0.748	0.071	0.209	0.218	0.025	0.162	0.025
00074346	0.664	0.078	0.168	0.198	0.118	0.151	0.036
00074352	0.631	0.076	0.146	0.383	0.472	0.308	0.040
00074368	0.609	0.129	0.182	0.278	0.254	0.283	0.018
00074385	0.764	0.152	0.185	0.257	0.265	0.229	0.015
00074399	0.520	0.226	0.192	0.291	0.340	< 0.004	0.050
00074422	0.552	0.113	0.171	0.234	0.111	0.212	0.032
00074427	0.710	0.123	B 0.389	0.211	0.089	0.196	0.015
00074450	0.672	0.138	0.140	0.217	0.096	0.166	0.017
00063796	0.705	0.125	0.163	0.181	0.150	0.136	0.008
00074456	0.829	0.087	0.169	0.110	0.058	0.076	0.008

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00074288	0.0138	0.004	B 0.01367	0.0016	0.0508	0.00113	LG 0.3134
00074304	0.0147	0.004	0.00168	0.0014	0.0565	0.00108	0.8420
00074330	0.0138	0.005	0.00203	0.0032	0.0450	0.00089	1.1083
00074346	0.0122	0.004	0.00326	0.0030	0.0459	0.00086	1.0339
00074352	0.0173	0.003	0.00225	0.0036	0.0349	0.00056	1.3897
00074368	0.0155	0.003	0.00256	0.0024	0.0319	0.00074	2.0463
00074385	0.0129	0.004	0.00281	0.0025	0.0341	0.00076	2.5720
00074399	0.0168	0.003	0.00400	0.0027	0.0398	0.00109	2.9118
00074422	0.0097	0.003	0.00136	0.0020	0.0416	0.00122	2.1016
00074427	0.0151	0.002	0.00145	0.0018	0.0473	0.01682	1.6298
00074450	0.0118	0.003	LG 0.00059	0.0014	0.0525	0.01415	D 0.5812
00063796	0.0105	D 0.002	0.00132	0.0017	0.0395	0.00869	0.4874
00074456	0.0100	0.007	0.00163	UG 0.0075	0.0214	0.00240	0.5464

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=PALMERSTON LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00074292	AP02144	AS	02	01	JAN 27, 1987	DEC 30, 1986	1300	1300	1	72549	
00074309	AP02164	AS	02	01	FEB 24, 1987	JAN 27, 1987	1315	1300	1	71064	
00074335	AP02210	AS	02	01	MAR 25, 1987	FEB 24, 1987	1600	1315	1	39960	
00074351	AP02233	AS	02	01	APR 21, 1987	MAR 25, 1987	1030	1600	1	74624	
00074357	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	1300	1030	1	65124	
00074373	AP02284	AS	02	01	JUN 16, 1987	MAY 19, 1987	1300	1300	1	65034	
00074398	AP02300	AS	02	01	JUL 14, 1987	JUN 16, 1987	1300	1300	1	40059	
00074403	AP02307	AS	02	01	AUG 11, 1987	JUL 21, 1987	1300	1400	1	25620	
00074426	AP02325	AS	02	01	SEP 9, 1987	AUG 11, 1987	1600	1300	1	8435	
00074431	AP02359	AS	02	01	OCT 6, 1987	SEP 9, 1987	1300	1600	1	48743	
00074455	AP02400	AS	02	01	NOV 3, 1987	OCT 6, 1987	1300	1300	1	94286	
00063795	AP02411	AS	02	01	DEC 1, 1987	NOV 3, 1987	1130	1300	1	86557	
00074460	AP02445	AS	02	01	DEC 29, 1987	DEC 1, 1987	1300	1300	1	77868	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00074292				12.72		5.03		0.090		1.268		0.338	
00074309				16.09		4.90		0.190		UG 1.449		0.957	
00074335		A	F	6.80		3.63		0.131		0.613		0.613	
00074351				4.49		4.38		0.172		1.112		0.570	
00074357				3.77		3.79		0.084		0.845		1.996	
00074373				5.42		8.35		0.266		1.599		0.953	
00074398		ABC	F	5.98		6.17	D	0.312	D	0.886		1.010	
00074403		A	FZ	4.47		10.42	D	0.390	D	0.995		1.347	
00074426		A	F	U 44.50	U	57.14	U	2.229	U	8.358	U	14.641	
00074431				4.89		6.77		0.232		1.087		0.728	
00074455				4.49		3.37	D	0.127	D	1.071		0.408	
00063795				4.72		3.07		0.107		0.814		0.318	
00074460				13.03		3.08		0.196		0.674		0.347	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=PALMERSTON LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00074292	0.648	0.059	0.214	0.078	0.055	0.104	0.036
00074309	0.887	UG 0.212	0.357	D 0.139	0.061	D 0.353	0.029
00074335	0.663	0.048	0.288	0.096	< 0.006	0.166	0.017
00074351	0.395	0.056	0.153	0.121	0.102	0.141	0.021
00074357	0.369	0.114	0.121	UG 0.388	0.401	0.499	0.036
00074373	0.538	0.108	0.185	0.215	0.256	D 0.258	0.009
00074398	0.524	0.175	0.211	0.200	0.153	D 0.303	D 0.036
00074403	D 0.566	B 0.275	D 0.267	0.230	0.306	< 0.010	0.022
00074426	U 3.497	U 1.719	U 1.245	U 1.541	U 1.227	U 2.549	U 0.219
00074431	D 0.523	0.092	0.151	0.154	0.089	0.178	0.037
00074455	0.329	0.076	0.091	0.101	0.037	0.103	0.016
00063795	0.468	0.073	0.132	0.090	0.041	0.077	0.005
00074460	0.449	0.043	0.121	0.050	0.035	D 0.102	0.002

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00074292	0.0040	0.003	0.00234	0.0018	0.0200	0.00057	0.4686
00074309	0.0084	0.003	0.00127	0.0021	0.0303	0.00091	1.2805
00074335	0.0083	0.004	0.00050	< 0.0005	0.0145	0.00073	2.0971
00074351	0.0047	0.002	0.00147	0.0017	0.0172	0.00027	1.3267
00074357	0.0169	0.002	0.00184	0.0014	0.0131	0.00041	1.0257
00074373	0.0121	0.003	D 0.00384	0.0015	0.0209	0.00045	1.9990
00074398	0.0112	0.004	D 0.00774	0.0017	0.0282	0.00022	UG 3.4699
00074403	0.0168	0.004	D 0.00781	< 0.0008	0.0199	0.00125	UG 3.8837
00074426	U 0.0664	U 0.020	U 0.01186	U 0.0142	U 0.1921	U 0.00427	U 16.5975
00074431	0.0082	0.003	0.00164	0.0012	0.0287	D 0.01970	2.0167
00074455	0.0069	0.003	LG 0.00032	0.0012	0.0223	0.00880	0.6926
00063795	0.0046	0.001	0.00104	0.0016	0.0260	D 0.00855	0.5580
00074460	0.0051	0.001	0.00077	0.0010	0.0225	0.00232	0.6871

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=PORT STANLEY LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00074289	AP02144	AS	02	01	JAN 26, 1987	DEC 30, 1986	0900	0900	1	28766	
00074305	AP02164	AS	02	01	FEB 24, 1987	JAN 26, 1987	0930	0900	1	86678	
00074331	AP02210	AS	02	01	MAR 24, 1987	FEB 24, 1987	0900	0930	1	71744	
00074347	AP02233	AS	02	01	APR 21, 1987	MAR 24, 1987	0900	0900	1	71127	
00074353	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	0900	0900	1	77283	
00074369	AP02284	AS	02	01	JUN 16, 1987	MAY 19, 1987	0930	0900	1	63251	
00074386	AP02284	AS	02	01	JUL 14, 1987	JUN 16, 1987	1450	0930	1	51955	
00074400	AP02307	AS	02	01	AUG 11, 1987	JUL 14, 1987	0845	1450	1	67555	
00074423	AP02325	AS	02	01	SEP 8, 1987	AUG 11, 1987	0800	0845	1	72751	
00074428	AP02359	AS	02	01	OCT 6, 1987	SEP 8, 1987	1130	0900	1	75630	
00074452	AP02400	AS	02	01	NOV 3, 1987	OCT 6, 1987	1100	1130	1	74366	
00063794	AP02411	AS	02	01	DEC 1, 1987	NOV 3, 1987	0845	1100	1	77615	
00074457	AP02445	AS	02	01	DEC 29, 1987	DEC 1, 1987	0930	0845	1	76228	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00074289		A	F	U 28.18	U	6.54	U	0.773	U	1.269	U	0.820	
00074305				19.84		3.92		0.329		1.211		0.779	
00074331		A		9.49		2.58		0.116		0.857		0.836	
00074347				10.15		5.60		0.267		1.357		1.033	
00074353				4.54		4.48		0.116		1.055		1.779	
00074369				7.69		9.06		0.285		1.209		0.715	
00074386		AC		4.73	!LA	****		0.246	!LA	****	!LA	****	
00074400		B		6.38		11.25		0.545		0.585		0.592	
00074423	60744			7.85		6.71		0.526		0.564		0.591	
00074428				7.00		6.35		0.218		0.813		0.496	
00074452				9.64		3.99		0.303		0.901		0.390	
00063794				8.54		3.56	UG	0.483		0.895		0.554	
00074457				9.90		3.21		0.230		0.741		0.259	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=PORT STANLEY LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00074289	U 1.373	U 0.130	U 0.501	U 0.229	U 0.149	U 0.122	U 0.050
00074305	0.808	0.084	0.322	0.059	0.078	0.153	0.017
00074331	0.495	0.052	0.207	0.116	LG 0.014	0.127	0.017
00074347	0.555	0.064	0.188	0.189	0.139	0.099	0.024
00074353	0.408	0.137	0.125	0.510	0.620	0.336	0.036
00074369	0.458	0.117	0.172	0.261	0.292	0.116	0.010
00074386	!LA ****	0.117	0.194	!LA ****	!LA ****	!LA ****	!LA ****
00074400	0.370	0.131	0.137	0.275	0.332	< 0.004	0.014
00074423	0.364	0.143	0.140	0.179	0.108	0.103	0.016
00074428	0.417	0.087	0.118	0.166	0.093	0.099	0.018
00074452	0.477	0.085	0.130	0.167	0.054	0.079	0.013
00063794	0.664	0.109	0.156	0.148	0.145	0.096	0.006
00074457	0.518	0.044	0.129	0.080	0.049	0.044	0.005

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00074289	U 0.0125	U 0.004	U 0.00174	U 0.0014	U 0.0501	U 0.00108	U 1.0777
00074305	0.0108	0.003	0.00150	0.0018	LG 0.0006	0.00073	0.8537
00074331	0.0116	0.004	0.00321	0.0014	0.0279	0.00066	0.9339
00074347	0.0093	0.003	0.00253	0.0027	0.0285	0.00044	1.8699
00074353	0.0278	0.003	0.00220	0.0022	0.0290	0.00038	0.7893
00074369	0.0161	0.004	0.00253	0.0016	0.0243	0.00047	1.8182
00074386	!LA ****	!LA ****	!LA ****	!LA ****	!LA ****	!LA ****	2.5022
00074400	0.0155	0.003	0.00355	0.0015	0.0303	0.00086	2.4425
00074423	0.0092	0.003	0.00124	0.0025	0.0282	0.00069	2.0206
00074428	0.0119	0.003	0.00119	0.0017	0.0298	0.01058	1.2627
00074452	0.0101	0.004	LG 0.00040	0.0022	0.0363	0.01116	0.7665
00063794	0.0077	LG 0.001	0.00142	0.0018	0.0296	0.00773	B 12.0209
00074457	0.0072	0.004	0.00157	UG 0.0075	D 0.0302	0.00294	0.6205

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION-SW STATION-SHALLOW LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00074293	AP02144	AS	02	01	JAN 28, 1987	DEC 31, 1986	0800	1630	1	41510	
00074308	AP02164	AS	02	01	FEB 24, 1987	JAN 28, 1987	0800	0800	1	89750	
00074334	AP02210	AS	02	01	MAR 25, 1987	FEB 24, 1987	0800	0800	1	20480	
00074350	AP02233	AS	02	01	APR 21, 1987	APR 14, 1987	1220	0800	1	19260	
00074356	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	0730	1220	1	81440	
00074372	AP02284	AS	02	01	JUN 16, 1987	MAY 19, 1987	0830	0730	1	79130	
00040755	AP02284	AS	02	01	JUL 14, 1987	JUN 16, 1987	1030	0830	1	87180	
00040870	AP02300	AS	02	01	AUG 11, 1987	JUL 14, 1987	0935	1030	1	86760	
00080271			02	01	SEP 8, 1987	AUG 11, 1987	0830	0935	1	.	
00040961	AP02332	AS	02	01	OCT 6, 1987	SEP 8, 1987	1300	0830	1	86670	
00084005	AP02377	AS	02	01	NOV 3, 1987	OCT 6, 1987	0830	1300	1	81280	
00040978	AP02398	AS	02	01	DEC 1, 1987	NOV 3, 1987	0800	0830	1	41860	
00084017	AP02424	AS	02	01	DEC 29, 1987	DEC 1, 1987	1100	0800	1	71260	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00074293		Q		8.81	2.36	0.205	0.903	0.282
00074308				13.31	3.01	0.214	0.836	0.282
00074334		A	F	U 4.47	U 1.83	U 0.220	U 0.659	U 0.757
00074350		AQ	Z	4.04	4.28	0.273	1.194	0.839
00074356				3.82	LG 0.83	0.095	0.262	0.381
00074372				3.61	6.38	0.215	0.777	0.616
00040755				2.64	5.43	0.181	0.333	0.432
00040870				2.40	5.42	0.153	0.242	0.628
00080271		AF		****	****	****	****	****
00040961				D 3.23	4.33	0.127	0.427	0.375
00084005				5.26	3.16	0.127	0.738	0.375
00040978		B		3.57	2.46	0.137	0.836	0.203
00084017				8.52	B 1.07	0.056	0.309	LG 0.091

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=SHALLOW LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074293	<W 0.012	0.036	0.225	0.076	0.057	0.078	0.016
00074308	0.479	0.103	D 0.209	0.061	0.024	0.068	0.019
00074334	U 0.610	U 0.024	U 0.291	U 0.064	U 0.012	U 0.055	U 0.057
00074350	0.753	UG 0.410	0.353	UG 0.207	UG 0.194	0.195	0.008
00074356	0.215	0.167	0.079	0.105	0.131	0.074	0.003
00074372	0.341	0.083	0.148	0.150	0.198	0.117	0.006
00040755	0.241	UG 0.442	0.111	0.155	0.190	0.132	0.001
00040870	0.225	0.088	0.096	0.195	0.212	0.191	0.012
00080271	****	****	****	****	****	****	****
00040961	0.254	0.080	0.083	0.082	0.036	0.110	0.017
00084005	0.240	B 0.271	0.105	0.066	0.027	0.071	0.029
00040978	0.406	D 0.112	0.194	0.096	D 0.063	0.060	0.002
00084017	LG 0.218	LG 0.011	0.082	0.030	LG 0.008	0.035	LG 0.001

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074293	0.0024	0.005	0.00072	0.0010	LG 0.0099	0.00063	0.6023
00074308	0.0042	0.004	0.00123	0.0010	0.0203	0.00089	0.9136
00074334	U 0.0024	U 0.005	U 0.00049	U 0.0010	U 0.0112	U 0.00112	U 2.9932
00074350	0.0062	0.003	D 0.00623	UG 0.0057	LG 0.0067	0.00042	UG 2.9751
00074356	0.0044	LG 0.001	0.00147	0.0012	LG 0.0018	0.00011	1.2402
00074372	0.0071	0.003	0.00152	0.0011	0.0118	0.00034	1.4407
00040755	0.0086	0.005	0.00149	0.0011	0.0123	0.00037	1.2044
00040870	0.0098	0.003	0.00127	0.0009	0.0148	0.00029	0.5936
00080271	****	****	****	****	****	****	****
00040961	0.0048	0.003	0.00069	0.0006	0.0127	0.00040	1.5807
00084005	0.0043	0.003	0.00086	0.0010	0.0123	LG 0.00001	0.6312
00040978	0.0036	0.005	0.00024	0.0007	0.0131	0.00072	D 1.2303
00084017	0.0025	0.001	0.00042	LG 0.0003	LG 0.0039	0.00182	0.7620

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=WILKESPORT LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00074290	AP02144	AS	02	01	JAN 27, 1987	DEC 30, 1986	1340	1700	1	77246	
00074306	AP02164	AS	02	01	FEB 24, 1987	JAN 27, 1987	1045	1340	1	83096	
00074332	AP02210	AS	02	01	MAR 24, 1987	FEB 24, 1987	1000	1045	1	77236	
00074348	AP02233	AS	02	01	APR 21, 1987	MAR 24, 1987	1530	1000	1	70308	
00074354	AP02233	AS	02	01	MAY 19, 1987	APR 21, 1987	1000	1545	1	75497	
00074370	AP02284	AS	02	01	JUN 16, 1987	MAY 19, 1987	1400	1000	1	68969	
00074387	AP02284	AS	02	01	JUL 14, 1987	JUN 16, 1987	1500	1400	1	77510	
00074401	AP02307	AS	02	01	AUG 11, 1987	JUL 14, 1987	1000	1500	1	74340	
00074424	AP02325	AS	02	01	SEP 8, 1987	AUG 11, 1987	1030	1000	1	41550	
00074429	AP02359	AS	02	01	OCT 6, 1987	SEP 8, 1987	1430	1030	1	85600	
00074453	AP02400	AS	02	01	NOV 3, 1987	OCT 6, 1987	1030	1430	1	86630	
00063792	AP02411	AS	02	01	DEC 1, 1987	NOV 3, 1987	1015	1030	1	68480	
00074458	AP02445	AS	02	01	DEC 29, 1987	DEC 1, 1987	1400	1015	1	75850	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00074290				18.38	5.98	0.084	1.295	0.479
00074306				UG 22.09	4.81	LG 0.018	1.408	1.264
00074332				15.62	4.27	0.097	1.062	1.750
00074348				10.25	6.37	0.225	1.408	0.860
00074354				9.95	4.66	0.103	0.914	UG 2.735
00074370		B		11.35	9.13	0.275	1.638	1.359
00074387				8.93	7.74	0.400	0.710	0.855
00074401		A		13.90	9.08	0.522	0.552	0.741
00074424		AB		4.71	5.78	0.368	0.746	0.939
00074429				9.60	LG 0.12	0.193	0.800	0.812
00074453				9.20	3.90	0.142	0.981	0.560
00063792				11.18	2.75	0.168	0.657	0.518
00074458		Q		12.44	3.51	0.132	0.725	0.278

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=WILKESPORT LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074290	0.939	0.080	0.298	0.124	0.076	0.090	0.046
00074306	0.975	0.099	0.355	0.042	0.092	0.221	0.007
00074332	0.641	0.054	0.196	0.172	0.020	0.308	0.019
00074348	0.661	0.069	0.182	0.210	0.150	0.147	0.029
00074354	0.623	0.109	0.168	0.618	0.643	D 0.497	0.051
00074370	0.696	0.117	UG 0.219	0.326	0.319	0.222	0.016
00074387	0.639	0.125	0.154	0.252	0.258	0.165	0.009
00074401	0.578	0.119	0.139	0.240	0.305	< 0.003	0.024
00074424	0.433	0.149	0.154	0.138	0.121	0.108	0.028
00074429	0.537	0.075	0.118	0.181	0.113	0.135	0.022
00074453	0.496	0.085	LG 0.092	0.162	0.095	0.095	0.012
00063792	0.613	0.093	0.128	0.131	D 0.046	0.075	0.004
00074458	0.639	0.040	0.156	0.073	0.048	0.054	0.008

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074290	0.0072	0.004	0.00168	0.0031	0.0460	0.00062	0.3884
00074306	0.0095	0.003	0.00168	0.0035	0.0487	0.00107	1.0109
00074332	0.0105	0.006	0.00246	0.0021	0.0537	0.00085	0.9749
00074348	0.0095	0.003	0.00256	0.0030	0.0374	0.00071	1.3156
00074354	0.0200	0.004	D 0.00331	0.0046	0.0404	0.00062	0.9510
00074370	0.0141	0.003	0.00232	0.0026	0.0355	0.00067	1.5224
00074387	0.0126	0.003	0.00219	0.0021	0.0275	0.00059	1.8062
00074401	0.0104	0.004	0.00350	0.0046	0.0289	0.00124	2.9728
00074424	LG 0.0046	0.003	0.00313	0.0036	0.0212	0.00077	2.3779
00074429	0.0105	0.003	0.00280	0.0032	0.0374	0.01495	1.3318
00074453	0.0081	0.003	LG 0.00092	0.0027	0.0323	0.00854	0.7619
00063792	0.0051	LG 0.001	0.00131	0.0020	0.0292	0.01066	1.2339
00074458	0.0066	0.007	0.00105	0.0018	0.0204	0.00295	0.7449

^Z